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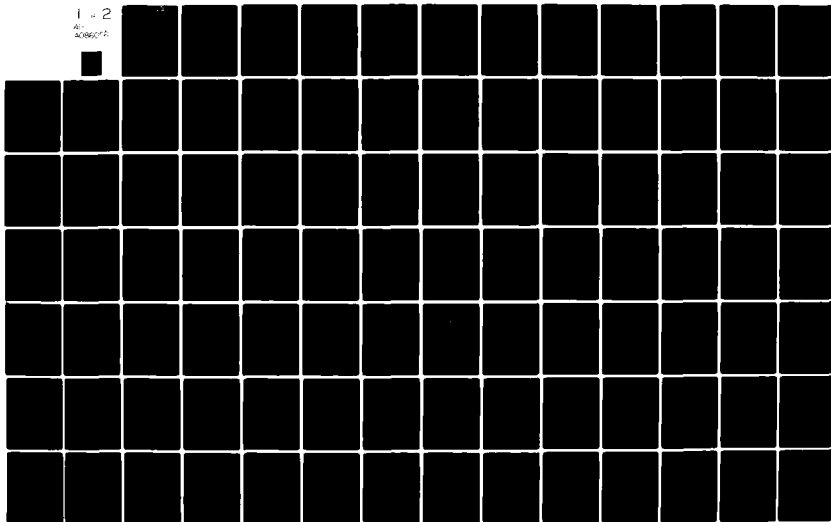
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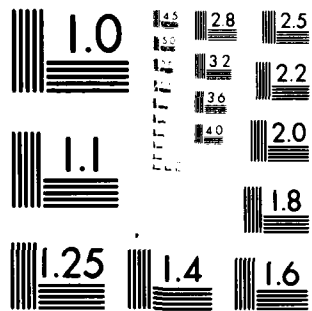
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**BASELINE DESCRIPTION AND ANALYSIS  
OF THE  
OPERATIONS RELATED TO WAREHOUSE CONTROLLED DOCUMENTS  
AT THE  
NAVY PUBLICATIONS AND FORMS CENTER, PHILADELPHIA, PA.**

**VOLUME II  
\* \* \*  
PHASE II FINAL REPORT**

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ELECTE  
JUN 26 1980**

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**STERLING SYSTEMS, INCORPORATED  
1749 OLD MEADOW ROAD  
MCLEAN, VIRGINIA 22102**

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Baseline Description and Analysis  
of the  
Operations Related to Warehouse Controlled Documents  
at the  
Navy Publications and Forms Center, Philadelphia, ~~Pa~~  
Pennsylvania.

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10) Dev R./Chaudhary  
Arvin G./Rishon  
Arthur H./Bedford

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Sterling Systems, Incorporated  
1749 Old Meadow Road  
McLean, Virginia 22102

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categories, analysis of procurement activities, and description of the physical characteristics of the stocked documents.

Phase II (documented in Volume II) focused on: development of the cost and volume estimates for NPFC and printing support operations, estimation of the number of line items stocked by NPFC by document category, geographic distribution of document demand, document cancellations and disposal activities, and NPFC interface with Document Preparing Activities.

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## 1.0 INTRODUCTION

David W. Taylor Naval Ship Research and Development Center (DTNSRDC) has contracted with Sterling Systems, Incorporated to develop a baseline description of the Naval Publications and Forms Center (NPFC) operations associated with the management of warehouse controlled documents. Specific activities under Phase I of this overall effort focused on the following:

- a. Functional description of the order processing activities
- b. Estimation of demand for NPFC services based on the characterization of customer base and analysis of customer orders
- c. Characterization of stocked documents based on the analysis of the physical characteristics of selected documents
- d. Identification of performance measures that can be used to analyze NPFC operations and suggestions for baseline modifications

A report entitled "Baseline Description and Analysis of Operations Related to Warehouse Controlled Documents at the Navy Publications and Forms Center, Philadelphia, Pa. (Volume I)" describing the results of the analysis performed under Phase I of the effort is submitted under a separate cover.

This particular report (Volume II) documents results of the Phase II effort which focused on the following specific tasks:

- a. Development of the cost estimates for major NPFC operations for warehouse controlled documents
- b. Development of additional baseline data for NPFC activities related to warehouse controlled documents which included:
  - Estimation of the number of line items managed by NPFC under each major document category
  - Document disposal activities/volumes
  - Geographic distribution of demand by major document category



- NPFC interface with the Document Preparing Activities to identify data sources which can be tapped in the future for describing the document preparation process.

- c. Development of cost and volume data for NPPSO operations in support of NPFC's warehouse controlled documents.

The development of the data in each of the above areas required use of certain approaches and assumptions. These approaches and assumptions are appropriately documented in the report.

The results of the Phase II study effort are included in the subsequent sections of this report. These include:

Section 2.0 - Cost Analysis of NPFC Operations for Warehouse Controlled Documents

Section 3.0 - Development of Additional Baseline Data for NPFC Activities Related to warehouse controlled documents

Section 4.0 - Analysis of NPPSO Operations Supporting warehouse controlled documents

Any significant highlights or major findings in each analysis area are included in that particular section.

Each of the above listed sections and topics are covered in detail in the following pages of this report.

## 2.0 COST ANALYSIS OF NPFC OPERATIONS FOR WAREHOUSE CONTROLLED DOCUMENTS

### 2.1 INTRODUCTION

This section presents cost estimates developed for major NPFC functions and operations associated with the management of warehouse controlled documents. The purpose of this analysis is to identify major cost elements, associate each of these elements with the applicable functions and operations, and establish and document the basis for developing cost estimates.

### 2.2 CONCEPTUAL FRAMEWORK AND BASIC ASSUMPTIONS USED IN COSTING NPFC FUNCTIONS/OPERATIONS

For costing purposes, the overall handling and administration of warehouse controlled (W/C) documents has been divided into four (4) major functions which are listed below:

- I. Requisition Processing and Issuing
- II. Receiving Documents for Entry into the NPFC System
- III. Replenishment of Documents from Bulk and Procurement from NPPSO
- IV. Initial distribution of Documents

Within the scope of each function, there are major operations necessary to accomplish a set of activities associated with each function. A total of sixteen (16) major operations for the above four (4) functions have been identified for cost analysis. There are staff and equipment resources, materials/supplies and activity volumes which were directly associated with each operation. The cost estimates for these elements are part of the total direct costs. Administrative and facilities overhead costs were considered part of the total indirect costs and were allocated to each operation using the direct labor hours as the basis. The total costs (direct

and indirect) for each operation were associated with their respective production volumes, wherever it was meaningful and possible to do so, to obtain the estimated cost per unit.

The overall approach for costing direct labor and supervision consisted of utilizing NPFC fiscal year 1979 job order codes for individual activities and organizational documents. These job order codes were directly associated with each operation to determine direct labor (including supervision) hours and costs. The following basic approach and assumptions were used in developing estimates for various cost elements.

- For job order codes applicable only to warehouse controlled items, the direct hours and costs were extracted from the Job Cost Status Report for the FY 1979.
- For job order codes common to both the warehouse controlled and the COG I items, the total hours and costs were allocated using appropriate criteria for each. Allocation criteria used for splitting some of the common job order codes was based upon estimates of cognizant personnel associated with the said operation and organizational code, and from the Management Planning Division (Code 40). These job order codes are as follows:

10009, 10131, 10133, 10192, 10201, 10202, 10211, 10258, 10268

For other common job order codes, the criteria for splitting hours and costs was based upon a three month sample of volume and labor hours data. These job order codes are as follows:

10203, 10204, 10224, 10276

For the following job order codes, actual weekly volumes for the entire year, along with their standard hours, were used for splitting hours and costs:

10112, 10126

- Production volumes for warehouse controlled items for each job order code were obtained from the Resource Management Feeder Reports and from the Management Planning Division. Standards were used along with an 85% efficiency factor for computing volumes where acceptable information could not otherwise be obtained. Management Planning Division's estimates and weekly reports were utilized for splitting combined production volumes for warehouse controlled and COG I items. Actual or estimated data for the production volumes is for the fiscal year 1979.
- The packing supplies costs were determined based upon a three month distribution of various types of packs associated with a specific job order code. Actual volumes and cost per pack were used in computing the total supplies cost. The materials rental costs applicable to certain job order codes were obtained from the Job Order Cost Status Report.
- The cost of ADP support provided by ASO to NPFC on a non-reimbursable basis was not available. This cost, applicable to certain operations, was therefore not reflected.
- The necessary information related to equipment acquisition costs, date of purchase and useful life was obtained from the Management Planning Division. Estimates for a similar piece of equipment were used for those units for which actual cost figures were not available from NPFC. Equipment maintenance information was obtained from the ASO Public Works Branch for the conveyor system and for the forklift trucks used for materials handling. The maintenance costs for equipment used in the packing department were obtained from the individual maintenance records for FY 1979.
- All equipment pieces were considered to have a zero salvage value at the end of their useful lives. Equipment purchase price was apportioned on an annual basis over its useful life at an interest rate of 10%. The equipment ownership cost represents an equivalent uniform series of annual costs spread over its useful life.

- Estimates for percent use of equipment for warehouse controlled items were obtained from the operating departments and the Management Planning Division.
- The costs of bin racks used in the storage department and the mechanical loading platforms were not available and have not been included in this cost analysis. The maintenance costs of certain equipment like typewriters, calculators, tote boxes, etc., were considered insignificant for this cost analysis and, therefore, not included.

### 2.3 SUMMARY OF RESULTS

The following Tables 2.3-1 through 2.3-6 present estimated annual costs by individual cost categories for major NPFC functions and operations performed for managing the warehouse controlled documents. These tables are as follows:

Table 2.3-1 Overall Cost Summary by Major NPFC Functions/Operations

Table 2.3-2 Direct Costs Associated with Major NPFC Functions/Operations

Table 2.3-3 An Overview of Job Order Codes Associated with NPFC Functions/Operations

Table 2.3-4 Summary of Estimated Equipment Costs

Table 2.3-5 Indirect Administrative/Management Cost Estimates

Table 2.3-6 Estimated Overhead Costs for Physical Facilities

An explanation of these tables along with their significant highlights are presented in the following paragraphs.

Table 2.3-1

This table is an overall summary presentation of individual cost elements related to each major function and operation. Total costs have been computed for four separate functions listed earlier. Within each functional area, a set of operations are identified as individual items for which annual cost estimates and associated unit volumes are presented. The production or activity volumes for certain operations and for the four functions are not given because of the lack of needed data or difficulty in developing composite work units in a meaningful manner. Accordingly, the work units and volumes for certain operations and activities within the same function and/or operation cannot be combined. Therefore, the cost per unit for the whole function could not be computed and the operation cost per unit is given wherever consistent data was available for the production volumes. The total annual cost estimates of overall functions/operations related to warehouse controlled (W/C) documents, as broken down by major cost categories presented in the table, are summarized below:

● DIRECT COSTS

- Direct Labor & Supervision	\$1,007,961	64.5%
- Direct Equipment	\$ 47,869	3.0%
- Direct Materials & Supplies	\$ 88,448	5.6%
TOTAL DIRECT COSTS	\$1,144,278	73.1%

● INDIRECT COSTS

- Administrative and Management	\$ 200,894	12.9%
- Overhead Facilities	\$ 216,740	14.0%
TOTAL INDIRECT COSTS	\$ 417,634	26.9%

● TOTAL DIRECT AND INDIRECT COSTS	\$1,561,912	100 %
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The individual cost categories listed above and the supporting data for estimating costs for each category and provided in the following paragraphs.

Table 2.3-2

This table presents all direct costs associated with each function/operation. Costs are broken down by each function and for operations falling within its scope. NPFC job order codes used for individual activities falling within the scope of an operation have been properly associated with the corresponding functions/operations. NPFC organization code represents the organizational unit where the given job order codes are currently being used for reporting activity volumes and labor hours. The job order codes marked with an asterisk are being used for reporting warehouse controlled (W/C) documents as well as COG I items. However, the data presented for the activity labor costs and associated production volumes, and the total labor hours for the operation has been appropriately allocated for the warehouse controlled documents. The direct labor costs include supervision as well as allowance for holidays, sickness, personal time, etc. The equipment utilized for certain operations along with the number of units and their estimated percent use for warehouse controlled documents is presented in the table. Materials and supplies costs, wherever applicable to a specific activity within an operation, include major packing supplies, consumables and rentals. All materials and supplies costs have been appropriately allocated for their usage for warehouse controlled documents.

Table 2.3-3

This table presents an overview of job order codes which have been associated with major NPFC functions/operations highlighted in Table 2.3-2. The column marked "Action/Work Units" represents in summary the description of the activity and the work unit associated with a specific job order code. The data for the various cost items and

the labor hours indicated in the table were extracted from the NPFC Job Cost Status Report for the fiscal year ending in September 1979. The table also indicates the criteria used for splitting common job order codes (i.e., codes jointly associated with both the warehouse controlled and the COG I items) for the allocation of direct labor hours and costs to the warehouse controlled documents. For certain job order codes which are used for more than one function/operation, a relative criteria for splitting direct labor hours and costs is indicated in the last column of this table.

Table 2.3-4

This table presents annual costs of ownership (purchase or lease) and maintenance of major NPFC equipment utilized in support of NPFC functions/operations related to warehouse controlled documents. None of the equipment currently being used has been planned for replacement within the next two years. The annual ownership cost was determined by taking the original purchase price of the equipment unit which was amortized equally on an annual basis over its useful life at an interest rate of ten percent (10%). Each piece of equipment has been associated directly to a specific function/operation. These functions and operations are represented in this table by their specific codes being used in this report. The total equipment cost (ownership and maintenance) on an annual basis is appropriately allocated for their utilization for warehouse controlled documents in Table 2.3-2.

Table 2.3-5

This table presents annual cost estimates of administrative/management support as allocated to the warehouse controlled documents. The total administrative/management personnel cost was allocated to individual functions/operations based upon a percent of direct labor hours for each. The indirect administrative/management cost as



allocated to specific functions/operations is presented in the summary Table 2.3-1. The cost estimates for the indirect management support for the materials department and the inventory control department were allocated to their specific functions/operations based upon a percent of direct labor hours for each department.

Table 2.3-6

This table provides a breakdown of estimated overhead costs associated with NPFC physical facilities. The total NPFC costs on an annual basis were further allocated for their use for warehouse controlled documents. The allocation criteria used for individual items has been indicated in the footnotes of this table. The total costs identified do not include items such as office furniture which was considered materially insignificant.

TABLE 2.3-1. OVERALL COST SUMMARY BY MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)												
FUNCTION CODE & DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	DIRECT COSTS			INDIRECT COSTS			TOTAL OPER. COST(\$)	PRODUCTION VOLUME		OPER. COST PER UNIT (\$)
			DIRECT LABOR & SUPER. COSTS (\$)	EQUIPMENT COSTS (\$)	MATERIALS & SUPPLIES COSTS(\$)	TOTAL DIRECT COSTS (\$)	ADMINIST. / MGMT. COSTS (\$)	OTHER OVHD. COSTS FACILITIES (\$)		QUANT.	WORK UNIT	
(1) REQUISITION PROCESSING (ISSUING)	A	Mailing Handling (Incoming Requisition)	4,416			4,416	644	1,192	6,252	218,370	Requisitions	.03
	B	Validation at Customer Service	120,438	244		120,682	23,521	33,378	177,581	-	-	N/A
	C	Programming of Requisitions	29,824	166		29,990	10,177	8,344	48,511	-	-	N/A
	D	Bin Station Operations Related to Issuing	316,852	24,961		341,813	50,498	61,788	454,099	2,628,924	Line Items	.17
	E	Packing Requisitions	68,564	1,402	25,247	95,213	18,958	14,305	128,476	310,341	Packs	.41
	F	Requisition Mailing	998		823	1,821	109	200	2,130	-	-	N/A
		TOTAL FOR THE FUNCTION	541,092	26,773	26,070	593,935	103,907	119,207	817,049	-	-	N/A

TABLE 2.3-1. OVERALL COST SUMMARY BY MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)												
FUNCTION CODE & DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	DIRECT COSTS			INDIRECT COSTS			TOTAL OPER. COST(\$)	PRODUCTION VOLUME		OPER. COST PER UNIT (\$)
			DIRECT LABOR & SUPER. COSTS (\$)	EQUIPMENT COSTS (\$)	MATERIALS & SUPPLIES COSTS(\$)	TOTAL DIRECT COSTS (\$)	ADMINIST./ MGMT. COSTS (\$)	OTHER OVHD COSTS FACILITIES (\$)	TOTAL INDIRECT COSTS (\$)	QUANT.	WORK UNIT	
(II) RECEIVING DOCUMENTS FOR ENTRY INTO THE NPFC SYSTEM (INCLUDES INITIALS AND REPLENISHMENTS)	A	Catalog Operations for All WHSE. Con- trolled Items	29,203			29,203	8,672	5,895	14,567	28,900	Catalog Actions	1.50
	B	Process Receipts of Warehouse Controlled Items	17,909			17,909	7,678	4,053	11,731	17,290	Line Items	1.71
	C	Receipt & Storage of Printed Documents (From NPFSO & Other Sources)	96,796	3,070	1,056	100,922	15,211	18,423	33,634	-	-	N/A
	D	Distribution of Material in Bin & Bulk Storage Areas Plus Other Incidental Opera- tions - Reworking, Disposal & Catch All	40,625	6,762	5,469	52,856	9,836	8,475	18,311	28,414	Line Items	2.50
		TOTAL FOR THE FUNCTION	184,533	9,832	6,525	200,890	41,397	36,846	78,243	-	-	N/A

TABLE 2.3-1. OVERALL COST SUMMARY BY MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)												
FUNCTION CODE & DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	DIRECT COSTS			INDIRECT COSTS			TOTAL OPER. COST(\$)	PRODUCTION VOLUME		OPER. COST PER UNIT (\$)
			DIRECT LABOR & SUPER. COSTS (\$)	EQUIPMENT COSTS (\$)	MATERIALS & SUPPLIES COSTS(\$)	TOTAL DIRECT COSTS (\$)	ADMINIST./MGMT. COSTS (\$)	OTHER OVHD COSTS FACILITIES (\$)		QUANT.	WORK UNIT	
(III) REPLACEMENT OF DOCUMENTS FROM BULK AND PROCUREMENT FROM NPFCO (INCLUDES INITIAL PROCUREMENT)	A	Checking for Replenishment From Bulk - and Sorting	9,545	335		9,880	2,733	2,714	15,327	-	-	N/A
	B	Transfer of Materials From Bulk & Bin Storage and Other Incidental Oper. - Reworkhousing, Disposal and Catch All	51,260	1,032	3,077	55,369	9,051	9,930	74,350	31,908	Line Items	2.33
	C	Process Replenishment Orders & Initial Procurement of MHSE. Controlled Documents	20,669			20,669	8,017	4,695	33,381	15,872	Line Items	2.10
TOTAL FOR THE FUNCTION			81,474	1,367	3,077	85,918	19,801	17,339	123,058	-	-	N/A

TABLE 2.3-1. OVERALL COST SUMMARY BY MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)													
FUNCTION CODE & DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	DIRECT COSTS				INDIRECT COSTS			TOTAL OPER. COST(\$)	PRODUCTION VOLUME		OPER. COST PER UNIT (\$)
			DIRECT LABOR & SUPER. COSTS (\$)	EQUIPMENT COSTS (\$)	MATERIALS & SUPPLIES COSTS(\$)	TOTAL DIRECT COSTS (\$)	ADMINIST./MGMT. COSTS (\$)	OTHER OVHD COSTS FACILITIES (\$)	TOTAL INDIRECT COSTS (\$)		QUANT.	WORK UNIT	
(IV) INITIAL DISTRIBUTION OF DOCUMENTS	A	Preparation of Dist., List Maintenance & Receipt Control Oper.	58,307	183	684	59,174	10,379	12,597	22,976	82,150	-	-	N/A
	B	Distribution Packing	139,562	9,714	52,092	201,368	25,052	30,222	55,274	256,642	1,584,000	Packs	.16
	C	Distribution Mail Handling	2,993			2,993	358	529	887	3,880	-	-	N/A
		TOTAL FOR THE FUNCTION	200,862	9,897	52,776	263,535	35,789	43,348	79,137	342,672	-	-	N/A

TABLE 2.3-2 DIRECT COSTS ASSOCIATED WITH MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)

FUNCTION CODE	OPERATIONS DESCRIPTION	NPFC ORG. CODE	PRODUCTION VOLUME (W/C)		ASSOCIATED JOB ORDERS		PCT. OF TOTAL HOURS FOR THE JOB ORDER	EQUIPMENT ALLOCATION			TOTAL MATERIALS & SUPPLIES COST
			QUANTITY	UNIT DESCRIPTION	CODES	DIRECT LABOR COSTS (\$)		DESCRIPTION (NUMBER OF UNITS FOR WHSE. USE)	PCT. WHSE. USE	ANNUAL OWNERSHIP & MAINT. COSTS (\$)	
A	Mail Handling (Incoming Requisition)	411	218,370	Requisition	10009*	4,416	960				
			90,849 (127,189)	Tel. Orders (Est. L.I.)	10121	43,375	6,534	IBM/Remington Typewriters (5)	40%	146	
			No Count	No Units	10123 (Add. Res.)	7,149	1,035	Desk Calculators (4)	50%	98	
B	Validation at Customer Service	1052	20,221	Letters Edit.	10126*	69,914	11,491				
			No Count	Clerical Support	10192*	9,545	1,545	Olleviti Typewriters (2)	100%	146	
			35,067	Labels Typed	10191	20,279	3,012	Adding Machine (1)	100%	20	
C	Programming of Requisitions	3015	2,140,190	L.I.	10161	251,984	28,581	Conveyor System (1)	20%	24,933	
			172,428	L.I.	10139	15,403	1,753	Wheeled Carts (1)	100%	8	
			298,744	L.I.	10168	49,465	5,100	Tote Boxes (10)	100%	20	
D	Bin Issue Operations	3013	289,840	Packs	10212	38,786	5,399	Tape/Glue Machines (3)	100%	6	13,600
			64,035	Packs	Dir. NAVAIR Builet. 10203*	14,350	1,505				6,617
E	Packing Requisitions	3031									

TABLE 2.3-2 DIRECT COSTS ASSOCIATED WITH MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)													
FUNCTION CODE DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	NPFC ORGAN. CODE	PRODUCTION VOLUME (W/C)		ASSOCIATED JOB ORDERS		DIRECT LABOR HOURS FOR THE JOB ORDER CODE	PCT. OF TOTAL HOURS	EQUIPMENT ALLOCATION			TOTAL MATERIALS & SUPPLIES COST
				QUANTITY	UNIT DESCRIPTION	CODES	DIRECT LABOR COSTS(\$)			DESCRIPTION (NUMBER OF UNITS FOR WHESE. USE)	PCT. WHESE. USE	ANNUAL OWNERSHIP & MAINT. COSTS (\$)	
(1) REQUISITION PROCESSING (ISSUING)	F	Requisition Mail Handling	3035	94,902	Packs	10213	15,428	1,551	1.23	Shrink Wrap Machine (1)	15%	1,396	5,030
				No Count	Meas. Tons	10211*	998	116	.092				823
							541,092	68,582					
		SUBTOTALS											

TABLE 2.3-2 DIRECT COSTS ASSOCIATED WITH MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)													
FUNCTION CODE DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	NPFC ORGAN. CODE	PRODUCTION VOLUME (M/C)		ASSOCIATED JOB ORDERS		DIRECT LABOR HOURS FOR THE JOB ORDER CODE	PCT. OF TOTAL HOURS	EQUIPMENT ALLOCATION			TOTAL MATERIALS & SUPPLIES COST
				QUANTITY	UNIT DESCRIPTION	CODES	DIRECT LABOR COSTS (\$)			DESCRIPTION (NUMBER OF UNITS FOR WHESE. USE)	PCT. WHESE. USE	ANNUAL OWNERSHIP & MAINT. COSTS (\$)	
(II) RECEIVING DOCUMENTS FOR ENTRY INTO THE NPFC SYSTEM (INCLUDES INITIALS AND REPLENISHMENTS)	A	Catalog Operations for All WHESE. Controlled items	1032	28,900	Catalog Actions	10112*	29,203	3,315	2.64				
	B	Process Receipts of Warehouse Controlled Items	1052	17,290	L.I.	10124	17,909	2,316	1.84				
	C	Receipt and Storage of Printed Documents (From NPPSO and Other Sources)	3061	9,593	L.I.	10273 Clerical	5,889	900	.717				Rental 1,056
			3061	20,207	L.I.	10253 Receiving	86,952	9,132	7.28	Stand Up Fork(1)	100%	3,070	
			3061	No Count	Tote Box To STG.	10258*	3,955	408	.325				
	D	Distribution of Material to Bin and Bulk Storage Areas Plus Other Incidental Operations - Rearwarehousing, Disposal, etc.	3013	21,790	L.I.	10162 Bin	27,682	3,593	2.86				Rental 5,469
			3011	629	L.I.	10138 Bin	2,109	188	.150	Raymond Reach Fork Lift (1)	100%	4,762	
			3012	Est 1,169	L.I.	10145 Bulk	3,425	361	.287				
			3012	Est 2,004	L.I.	10147 Bulk	2,839	281	.225				
			3012	Est. 167	L.I.	10151 Bulk	2,156	208	.165				



TABLE 2.3-2 DIRECT COSTS ASSOCIATED WITH MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)													
FUNCTION CODE DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	NPFC ORG. CODE	PRODUCTION VOLUME (M/C)		ASSOCIATED JOB ORDERS		DIRECT LABOR HOURS FOR THE JOB ORDER CODE	PCT. OF TOTAL HOURS	EQUIPMENT ALLOCATION			TOTAL MATERIALS & SUPPLIES COST
				QUANTITY	UNIT DESCRIPTION	CODES	COSTS(\$)			DESCRIPTION (NUMBER OF UNITS FOR WHE. USE)	PCT. WHE. USE	ANNUAL OWNERSHIP & MAINT. COSTS (\$)	
(11) RECEIVING DOCUMENTS FOR ENTRY INTO THE NPFC SYSTEM (INCLUDES INITIALS AND REPLENISHMENTS)		SUBTOTALS	3013	2,655	L.I.	10170 Bin	2,414	291	.232	Tote Boxes (1000)	100%	2,000	
							184,533	20,993					

TABLE 2.3-2 DIRECT COSTS ASSOCIATED WITH MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)														
FUNCTION CODE	OPER. CODE	OPERATIONS DESCRIPTION	NPFC ORG. CODE	PRODUCTION VOLUME (W/C)		ASSOCIATED JOB ORDERS		DIRECT LABOR COSTS (\$)	HOURS FOR THE JOB ORDER CODE	PCT. OF TOTAL HOURS	EQUIPMENT ALLOCATION			TOTAL MATERIALS & SUPPLIES COST
				QUANTITY	UNIT DESCRIPTION	CODES					DESCRIPTION (NUMBER OF UNITS FOR WAREHOUSE USE)	PCT. WAREHOUSE USE	ANNUAL OWNERSHIP & MAINT. COSTS (\$)	
(111) REPLENISHMENT OF DOCUMENTS FROM BULK AND PROCUREMENT FROM NPFC (INCLUDES INITIAL PROCUREMENT)	A	Checking for Replenishment From Bulk - and Sorting	3015	No Count	Clerical	10192*		9,545	1,545	1.23	Adding Machines (2)	25%	10	(Rental) 3,077
	B	Transfer of Materials From Bulk and Bin Storage and Other Incidental Operations - Reworking, Disposal, etc.	3012	376	L.I.	Bulk 10151		4,799	462	.370	Bulk Locator Card File (1)	50%	325	
			3013	12,350	L.I.	Bin 10162		15,571	2,021	1.61	Fork Lift Truck (1)	20%	952	
			3013	3,228	L.I.	Bin 10170		2,951	356	.283	Wheeled Cart (10)	100%	80	
			3012	3,228	L.I.	Bulk 10145		9,259	977	.779				
C	3012	12,350	L.I.	Bulk 10147		17,442	1,727	1.37						
	3011	376	L.I.	Bin 10138		1,238	111	.088						
	1052	15,872	L.I.	10124		20,669	2,673	2.31						
		SUBTOTALS						81,474	9,872					

TABLE 2.3-2 DIRECT COSTS ASSOCIATED WITH MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)												
FUNCTION CODE DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	NPFC ORGAN. CODE	PRODUCTION VOLUME (W/C)		ASSOCIATED JOB ORDERS		DIRECT LABOR HOURS FOR THE JOB ORDER CODE	PCT. OF TOTAL HOURS	EQUIPMENT ALLOCATION		
				QUANTITY	UNIT DESCRIPTION	CODES	DIRECT LABOR COSTS (\$)			DESCRIPTION (NUMBER OF UNITS FOR WHSE. USE)	PCT. WHSE. USE	ANNUAL OWNERSHIP & MAINT. COSTS (\$)
(IV) INITIAL DISTRIBUTIONS OF DOCUMENTS	A	Preparation of Distros., List Maintenance and Receipt Control Operations	303	No Count	Scheduling	10202*	18,523	2,008	1.60			
			3064	No Count	Maintain Addresses	10276*	25,999	3,282	2.61	IBM/REM. Typewrit. (5)	50%	183
	B	Distros. Packing	3063	6,462	L.I.	10275	13,785	2,004	1.60			
			306	Est. 36,400	Collated Sets	10255	10,636	1,084	.864			
			3033	962,000	Packs	10204*	111,917	15,662	12.50	B & H Master Mailer (3) Tape/Glue Machine (14)	30%	1,890
											100%	28
			3031	28,000	Packs	10222	3,634	273	.217	Cheshire Labelling Machine (6)	15%	3,641
				594,000	Packs	10224*	13,375	1,272	1.01	P.B. Envelope Sealer (4)	25%	490
										B&H Sert N Fold (1)	60%	962
										Pitney Bowes Collater (1)	70%	1,168
										Non-Tier. Rld.1	50%	1,535
											TOTAL MATERIALS & SUPPLIES COST	

TABLE 2.3-2 DIRECT COSTS ASSOCIATED WITH MAJOR NPFC FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)

FUNCTION CODE DESCRIPTION	OPER. CODE	OPERATIONS DESCRIPTION	NPFC ORGAN. CODE	PRODUCTION VOLUME (W/C)		ASSOCIATED JOB ORDERS		DIRECT LABOR HOURS FOR THE JOB ORDER CODE	PCT. OF TOTAL HOURS	EQUIPMENT ALLOCATION			TOTAL MATERIALS & SUPPLIES COST
				QUANTITY	UNIT DESCRIPTION	CODES	COSTS (\$)			DESCRIPTION (NUMBER OF UNITS FOR WHE. USE)	PCT. WHE. USE	ANNUAL OWNERSHIP & MAINT. COSTS (\$)	
(IV) INITIAL DISTRIBUTION OF DOCUMENTS	C	Distribution Mail handling	3035	No Count	Meas. Tons	10211*	2,993	349	.280				
		SUBTOTALS					200,862	25,934					
		TOTAL FOR ALL FUNCTIONS					1,007,961	125,381	100				

Table: 2.3-3 AN OVERVIEW OF JOB ORDER CODES ASSOCIATED WITH MAJOR FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS)										
Job Order Code	Assoc. Func. Oper.	Action Work Units	# LMC Code	Total Hours	Total Amount	Student Hours	Student Amount	Materials and Sub- plies Cost(W/C)	Criteria for Splitting (W/C)	Functional Split Criteria
10161	ID	Spec./ Stand. L.I. (BIN)	91	27,668	248,167	913	3574			
10168	ID	Direc- tives L.I. (BIN)	91	5,100	49,465					
10139	ID	Whse. Items L.I. (BIN)	91	1,749	15,387	4	16			
10191	IC	Labels	91	3,012	20,279					
10192*	IC,IIIA	Clerical Ops.	91	7,725	47,724				40% of Total Hours	50% of Each
10212	IE	Manual Packs S/S	93	5,399	38,786			13,600+		
10203*	IE	Manual Packs (Direc.)	93	18,809	179,374			6,617+	Est. 8% of Total Hrs.	
10213	IE	S/W For Spec. Packs	93	1,551	15,428			5,030+		

#LMC Code - 41-Central Mailroom Oper. 83 - Inv. Control Catalog Branch (1032) 85 - Customer Service  
91-Storage 96 - Freight Terminal 93 - Packing  
90-Materials Department

Table: 2.3-3 AN OVERVIEW OF JOB ORDER CODES ASSOCIATED WITH MAJOR FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS) (Cont'd.)										
Job Order Code	Assoc. Func. Oper.	Action Work Units	LMC Code	Total Hours	Total Amount	Student Hours	Student Amount	Materials and Sup- plies Cost(W/C)	Criteria for Splitting (W/C)	Functional Split Criteria
10211*	IF,IVC	Postal Funcs.	93	8,138	75,313	1,152	4,510	823	Est. 5% Whse. Con- trolled	Est. Packs 25%, 75%
10112*	IIA	Catalog Actions	83	6,644	58,406				Hrs. on W/C -3315 (Wk. Rep.)	
10253	IIC	Receipts L.I. (BIN)	96	8,877	85,954	255	998			
10273	IIC	L.I. (Cler.) Spels.	96	900	5,889			Rental 1,056		
10258*	IIC	Tote Boxes	96	1,631	15,818				25% Whse.	63%, 37%
10138	IID,IIIB	All Oper. W/C-BIN	91	299	3,347					
10145	IID,IIIB	All Oper. Direc.- Bulk	91	1,338+	12,684				20 Pct. of Incoming Bulk for W/C = 3340 L.I.	27%, 73%
10147	IID,IIIB	All Oper. S/S-Bulk	91	2,008+	20,281				60% S/S 35% Direc. 5% Others	14%, 86%

+ Estimated Amt. - Not represented in job order costs report      Req. - Requisitions      S/S - Specs. and Stand.  
 \* Combined warehouse controlled items and pubs. and forms      L.I. - Line Items      W/C - Warehouse control  
    S/W - Shrink Wrap      Items

Table: 2.3-3 AN OVERVIEW OF JOB ORDER CODES ASSOCIATED WITH MAJOR FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS) (Cont'd.)										
Job Order Code	Assoc. Func. Oper.	Action Work Units	LMC Code	Total Hours	Total Amount	Student Hours	Student Amount	Materials and Sup- plies Cost(W/C)	Criteria for Splitting (W/C)	Functional Split Criteria
10151	IID, IIIB	All Oper W/C-Bulk	91	670+	6,955					31%, 69%
10162	IID, IIIB	All Oper S/S-BIN	91	5,440	42,572	174	681	Rental 8,546		64%, 36%
10170	IID, IIIB	All Oper Direc.- BIN	91	561	5,116	86	249			45%, 55%
10009*	IA	Mail Req.	41	9,072	42,463	419	1,698		3.7 Hrs./ Day Estimate	
10121	IB	Tel. Calls	85	6,534	43,375				80 Pct. of Calls Only For Units	
10123	IB	Add. Research	85	1,055	7,893	239	1,043		80 Pct. of Hours	
10124	IIIB, IIIC	Replen- ish/ Process (L.I.)	85	4,989	38,578					Std. Hrs. For Replen- -2673 Hrs.
10126*	IB	Sort, Edit Letters	85	17,353	109,426	1,799	7,097		60 Pct. of Hrs.	

Table: 2.3-3 AN OVERVIEW OF JOB ORDER CODES ASSOCIATED  
WITH MAJOR FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS) (Cont'd.)

Job Order Code	Assoc. Func. Oper.	Action Work Units	LMC Code	Total Hours	Total Amount	Student Hours	Student Amount	Materials and Sup- plies Cost(W/C)	Criteria for Splitting (W/C)	Functional Split Criteria
10202*	IVA	Sched. Distros.	93	7,560	69,759				Hrs. For Whse. -2008	
10276*	IVA	Address Actions	96	13,129	103,995			684	25 Pct. for Whse.	
10275	IVA	Rec. Control Order	96	2,004	13,785					
10204*	IVB	Manual Packs - Distros.	93	26,311	206,414	2,803	11,038	38,563+	Hrs. For Whse.- 15,662	
10222	IVB	Machine Packs - Distros.	93	273	3,634					
10224*	IVB	Machine Packs - Distros.	93	8,933	93,930			12,689+	Hrs. For Whse.-1272	
10255	IVB	Collat- ing Sets- Direc.	96	1,084	10,636					
10133*	301 MGMT	N/A	91	6,081	80,371				20 Pct. (EST.)	
10201*	303 MGMT	N/A	93	5,691	64,055				50 Pct. (EST.)	



Tables: 2.3-3 AN OVERVIEW OF JOB ORDER CODES ASSOCIATED WITH MAJOR FUNCTIONS/OPERATIONS (WAREHOUSE CONTROLLED DOCUMENTS) (Cont'd.)										
Job Order Code	Assoc. Func. Oper.	Action Work Units	LMC Code	Total Hours	Total Amount	Student Hours	Student Amount	Materials and Sup- plies Cost(W/C)	Criteria for Splitting (W/C)	Functional Split Criteria
10268*	306 MGMT	N/A	96	3,583	36,343			144	20 Pct. (EST.)	
10131*	300 MGMT	N/A	90	6,731	64,378			69	10 Pct. (EST.)	

Table: 2, 3-4 SUMMARY OF ESTIMATED EQUIPMENT COSTS										
EQUIPMENT DESCRIPTION	No. of Units	Organi- zation Code	Assoc. Function/ Operation	Date Instal.	Unit Purchase Cost	Avg. Life	Replac- ment Planned	Annual Ownership Costs	Annual Maintenance Costs	Total Equipment Cost
Typewriters - IBM/ Remington	10	1052 3064	I B, IV A	1977	450	10	No	73		73
Desk Calculators - Remington 411	4	1052	I B	1977	300	10	No	49		49
Typewriter - Olivetti	2	3015	I C	1977	450	10	No	73		73
Material Handling Conveyor System- Alvey Ferguson Co.	1	301	I C	1962	300,000	30	No	31,824	92,839#	124,663
Wheeled Carts	100	3011 3013	I D, III B	1965	75	25	No	8		8
Tote Boxes	1010	3011 3013	I D, II D	1970	20	25	No	2		2
Tape/Glue Machines	36	3032 3033	I E, IV B	1975	125	20	No	2		2
Shrink Wrap Machine - Meldatron	2	3031	I E	1973	19,000	15	No	2,498	6,810	9,308
Stand Up Fork	1	3061	II C	1962	600	20	No	70	3,000 <sup>+</sup>	3,070
Fork Lift Truck	2	3012	II D, III B	1967	15,000	20	No	1,762	3,000 <sup>+</sup>	4,762
Adding Machines	3	300	I C, III A	1977	125	10	No	20		20

# Includes reimbursable and non-reimbursable costs by NPFC  
Reimbursable portion - \$2,267 and Non-reimbursable portion - \$90,572.

\*Estimated maintenance costs include labor, parts, battery charges, etc.  
Source: ASO Public Works Branch, Transportation

Table: 2.3-4 SUMMARY OF ESTIMATED EQUIPMENT COSTS (contd.)										
EQUIPMENT DESCRIPTION	No. Of Units	Organi- zation Code	Assoc. Function/ Operation	Date Instal.	Unit Purchase Cost	Avg. Life	Replac- ment Planned	Annual Ownership Costs	Annual Maintenance Cost	Total Equipment Cost
Bulk Locator Card File	1	3015	III A		(Estimated) 5,600*	20	No	650		650
Non-Tiering Rider	1	303	IV B	1962	600	20	No	70	3,000 <sup>+</sup>	3,070
Master Mailer- Bell & Howell	3	3033	IV B	1972	15,000	15	No	1,972	128	2,100
Labeling Machine -Cheshire	6	3033	IV B	1972	20,000	15	No	2,629	1,416	4,045
Envelope Sealer -Pitney Bowes	4	3033	IV B	1972	3,000	15	No	394	96	490
Sert N Fold - Bell & Howell	1	3033	IV B	1972	(Estimated) 10,000	15	No	1,315	289	1,604
Pitney Bowes Collater	1	3033	IV B	1972	(Estimated) 10,000	15	No	1,315	354	1,669
Bin Racks	N/A									
Mechanical Loading Platforms	N/A									

\* These costs were estimated based upon figures available for a similar piece of equipment N/A-Information not available

<sup>+</sup> Estimated maintenance costs include labor, parts, battery charges etc.

Source: ASD Public Works Branch, Transportation

TABLE 2.3-5 INDIRECT ADMINISTRATIVE/MANAGEMENT COST ESTIMATES (W/C)			
NPFC ADM./MGMT. ORGANIZATION UNIT	Allocated Total Staff For WHSE. Controlled	Average Cost/Person Civilian & Military*	Total Cost For WHSE. Control. Items
NPFC Command	0.5	\$ 30,776	\$ 15,388
EEO - AAP	0.5	16,396	8,198
Planning Department	4	19,396	77,184
Comptroller Department	1	16,328	16,328
Total ADM./MGMT.			\$117,098

\* Supplied by the Budget and Statistics Division of NPFC Comptroller's Dept.  
(includes fringes and benefits)

Materials Department

(JOB ORDER COSTS Allocated for Warehouse Controlled  
Items)

Storage Management	\$16,074
Packing Management	\$32,028
Freight Terminal Management	\$ 7,298
Materials Department Management	\$ 6,445

Inventory Department

Indirect Management	\$21,951**
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\*\* Based upon a staff of 1.23 with one person costed at an average civilian salary of \$15,971 and .23 person costed at an average military salary of \$26,000

Table: 2.3-6 ESTIMATED OVERHEAD COSTS FOR PHYSICAL FACILITIES (W/C)

No.	Facilities Cost Elements	Estimation Basis <sup>+</sup>	Total NPFC Cost/Yr. (\$)	Cost Alloc. To WHSE Cont. Doc.
1	Maintenance & Repair of Buildings	Cost Account 7140	83,356	15,004
2	Communications - Telephone	Facilities Dept.	12,000	2,160
3	Steam Heat	55,100 M. BTU'S	311,315	56,037
4	Electricity Utilization	4,900 Mega Watt Hrs.	185,514	33,393
5	Water (Includes Fire Prevention)	2,908,000 Gallons	5,002	901
6	Sewage	2,105,000 Gallons	989	178
7	Janitorial Services	Facilities Dept. Est.	31,200	5,616
8	Security Services	806,047 Sq. Ft.	107,785	19,401
9	Building Space Usage **	806,047 Sq. Ft.	466,945	84,050

Total \$ 216,740

+ The amount and the applicable rates were obtained from the ASO Public Works Branch.

\* For item numbers 1,3,4,7,8, and 9, the WHSE. controlled document costs were allocated based upon the total building space usage (18%) for warehouse operations. For item numbers 2,5, and 6, the WHSE. controlled costs were allocated based upon the total staff personnel usage (18%) for warehouse operations.

\*\* Building costs were determined based upon 1943 asset acquisition value of \$ 4,629,633 amortized over a period of 50 years at an interest rate of 10% per annum.

### 3.0 DEVELOPMENT OF ADDITIONAL BASELINE DATA FOR WAREHOUSE CONTROLLED DOCUMENTS

This section provides baseline data in the following four areas:

1. Estimation of the Number of Line Items Managed by NPFC
2. Document Disposal Activities/Volumes
3. Geographic Distribution Demand
4. NPFC Interface with the Document Preparing Activities

Each of the above areas are treated in detail in the following pages.

### 3.1 ESTIMATION OF THE NUMBER OF WAREHOUSE CONTROLLED DOCUMENTS.

#### 3.1.1 Introduction

This section presents an estimate of the number of warehouse controlled documents stocked at NPFC, as of July 1979. In addition, the receipt of new basic documents for 1978 and 1979 is summarized. Document cancellations, for both basic documents and associated addendum line items, is summarized for the period July 1978 to July 1979.

Estimates for the aggregate number of line items, comprised of basic documents and associated addendum line items, are organized by document categories as designated in the Department of Defense Index of Specifications and Standards (DODISS). Estimates of the number of line items not included in the DODISS are based on NPFC staff reports and publications, with the exception of specifications peculiar to the Navy for which there is no estimated count (NAVAIR, NAVSEA, Ordnance Systems Commands, Naval Facilities Command, etc.). These amount to 2700 documents. Another exception includes 1800 security-controlled documents.

#### 3.1.2 Data Collection And Methodology

The document categories designated in the DODISS are comprised of the following:

- Military Specifications
- Military Standards
- Federal Specifications
- Federal Standards
- Federal Information Processing Standards (FIPS)
- Qualified Products Lists (QPL)
- Industrial Standards

- International Standards
- Military Handbooks
- Federal Handbooks
- USAF-ANA Standards
- ANA Design Standards
- AF-Navy Aeronautical Specifications
- USAF Specifications
- Other Department Directives
- Navy Aeronautical Bulletins
- USAF Specification Bulletins

For each of the listed categories, an estimate of the number of basic documents and associated addendum line items was computed.

Document categories not included in the DODISS and classified as warehouse controlled are comprised of the following:

- Data Item Descriptions (DIDS)
- Navy Departmental Directives (NAVINST)
- DOD Departmental Directives (DODINST)
- NAVAIR Technical Bulletins

The information related to the number of active basic DODISS line items by document category was developed from the DODISS Statistical Summary Report dated July 1979. The report provided a total count of basic documents organized by category, preparing activity and document custodian service branch.

The data from the DODISS Statistical Summary Report was also utilized to



provide the number of basic documents receipts and cancellations for 1978 and 1979.

Estimates of the number of associated addendum line items required the determination of addendum types by document category. Document addendum line items were identified as:

- Supplements
- Notices
- Addendums
- Interim Amendments
- Slash Sheets
- Change Notices

These addendum Line items were identified and estimated for DODISS designated document categories only; no estimate of addendums was computed for DIDS, NAVINST, DODINST or NAVAIR Technical Bulletins. The development of estimates was derived from a statistical sampling of the DODISS by document category. The sampling outcomes were projected for a ratio of addendums per 1000 basic documents, by document category, and are presented in Table 3.1-6.

The aggregate document totals were computed by summarizing the total basics and estimated addendums for each DODISS designated category. Totals for document categories not listed in the DODISS were obtained from the Planning Department (code 40) of NPFC and represent the departments estimate as of July 1979.

### 3.1.3 Summary of Results

The summary of findings is organized by document classification and category. Documents designated in the DODISS are characterized by the number of basic and

basics status, number of new document receipts, number of document cancellations and estimated number of addendum line items. Documents not listed in the DODISS are characterized by the total number of basics for each category.

The following tables are presented in this section:

Table 3.1-1 Active DODISS Coordinated Document Basics (1979)

Table 3.1-2 Summary of DODISS Document Basics

Table 3.1-3 Number of New Document Basics

Table 3.1-4 Number of Documents Cancelled

Table 3.1-5 Estimated Number of Non-DODISS Documents

Table 3.1-6 Estimated Basics Associated Document Line Items

Table 3.1-1

Documents stocked at NPFC are designated as Coordinated or Limited Coordinated under the provisions of the Defense Standardization and Specifications Program. Table 3.1-1 is organized to reflect the coordination status of the basic documents listed categories.

The addendum status of the basics is listed by document category. The number of document basics revised, amended or issued with addendum line items is listed by the type of associated addendum.

In July 1979, 42,738 document basics were listed in the DODISS, of these, 25,106 or 58.7% were classified as fully coordinated and 17,632 or 41.3% were classified as limited coordinated.

Military and federal specifications and standards constituted the most frequently revised, amended or supplemented document categories, and comprised the majority of document basics, 37,450 or 87.7%.

Table: 3.1-1 ACTIVE DODISS COORDINATED BASIC DOCUMENTS (1979)

Characteristics of Active Coordinated Basic Documents	Totals		Military Specs.		Military Standards		Federal Specs.		Federal Standards		FIPS	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Basic Documents	5,556	100.0	1408	25.35	1271	22.88	230	4.14	20	.359	30	.538
Revised Basic Document	9,804	100.0	3654	2.68	3334	2.94	1289	7.60	22	.224	-	-
Amended Basic Document	2,774	100.0	1809	65.21	-	-	564	20.33	8	.228	-	-
Slash Sheet Numbers	1,914	100.0	1300	67.92	27	1.41	265	13.84	19	9.92	-	-
Slash Sheet Revisions	3,614	100.0	3011	83.31	11	.304	428	11.84	-	-	-	-
Slash Sheet Amendments	905	100.0	792	87.51	-	-	30	3.31	-	-	-	-
Documents Used in Lieu of	73	100.0	46	63.01	-	-	-	-	-	-	-	-
Supplements	247	100.0	226	91.41	2	.809	8	3.23	1	.404	9	3.64
Notice	183	100.0	2	1.09	156	85.24	2	1.09	11	6.01	-	-
Qualified Documents	923	100.0	834	90.35	1	.108	86	9.31	-	-	-	-
Non Qualified Documents	35	100.0	34	97.14	-	-	1	2.86	-	-	-	-
*Totals	25,106	100.0	12284	48.99	4801	19.15	2816	11.23	81	.32	39	.15

\*Total Basic count less Qualified and Non-Qualified Basic Characterization.

Table: 3.1-1 ACTIVE DODISS COORDINATED BASIC DOCUMENTS (1979) (contd.)

Characteristics of Active Coordinated Basic Documents	QPL		Industrial Standards		Internat. *		Military Handbooks		Federal Handbooks		USAF-ANA. Standards	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Basic Documents	43	.773	1575	28.35	358	6.44	47	.846	0	0	503	9.05
Revised Basic Document	1251	12.76	21	.214	203	2.07	26	.265	-	-	1	.010
Amended Basic Document	84	3.02	61	2.19	248	8.94	-	-	-	-	-	-
Slash Sheet Numbers	156	8.15	79	4.12	68	3.55	-	-	-	-	-	-
Slash Sheet Revisions	-	-	-	-	164	4.53	-	-	-	-	-	-
Slash Sheet Amendments	2	0.22	-	-	81	8.95	-	-	-	-	-	-
Documents Used in Lieu of	27	36.98	-	-	-	-	-	-	-	-	-	-
Supplements	-	-	1	0.40	-	-	-	-	-	-	-	-
Notice	-	-	-	-	-	-	12	6.55	-	-	-	-
Qualified Documents	2	0.21	-	-	-	-	-	-	-	-	-	-
Non Qualified Documents	-	-	-	-	-	-	-	-	-	-	-	-
Totals	1563	6.23	1737	6.92	1122	4.47	85	.33	0	0	504	2.01

\*International Standardization Documents

Table: 3.1.1-1 ACTIVE DODISS COORDINATED BASIC DOCUMENTS (1979) (contd.)

Characteristics of Active Coordinated Basic Documents	ANA. Design Standards		AF-NAVY AERONAUT. Specs.		USAF Specs.		Other Dept. Directives		Navy Aero-naut. Bullets		USAF Specs. Bullets	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Basic Documents	52	.935	0	0	0	0	9	.161	10	.178	-	-
Revised Basic Document	-	-	-	-	-	-	-	-	3	.030	-	-
Amended Basic Document	-	-	-	-	-	-	-	-	-	-	-	-
Slash Sheet Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Slash Sheet Revisions	-	-	-	-	-	-	-	-	-	-	-	-
Slash Sheet Amendments	-	-	-	-	-	-	-	-	-	-	-	-
Documents Used in Lieu of	-	-	-	-	-	-	-	-	-	-	-	-
Supplements	-	-	-	-	-	-	-	-	-	-	-	-
Notice	-	-	-	-	-	-	-	-	-	-	-	-
Qualified Documents	-	-	-	-	-	-	-	-	-	-	-	-
Non Qualified Documents	-	-	-	-	-	-	-	-	-	-	-	-
Totals	52	.20	0	0	0	0	9	.03	13	.05	0	0

Table: 3.1-1 ACTIVE DODISS LIMITED COORDINATED BASIC DOCUMENTS. 1979

Characteristics of Active Limited Coordinated Documents	Totals		Military Specs.		Military Standards		Federal Specs.		Federal Standards		FIPS	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Basic Documents	4,738	100.0	3905	82.41	701	14.79	-	-	-	-	-	-
Revised Basic Document	5,006	100.0	4007	80.04	969	19.35	1	.019	-	-	-	-
Amended Basic Document	3,690	100.0	3685	99.86	1	.027	2	.054	-	-	-	-
Slash Sheet Numbers	1,638	100.0	1420	86.69	217	13.24	1	.061	-	-	-	-
Slash Sheet Revisions	1,436	100.0	1388	96.65	48	3.34	-	-	-	-	-	-
Slash Sheet Amendments	536	100.0	536	100.0	-	-	-	-	-	-	-	-
Documents Used in Lieu of	395	100.0	167	42.27	7	1.77	221	55.94	-	-	-	-
Supplement	78	100.0	78	100.0	-	-	-	-	-	-	-	-
Notice	115	100.0	-	-	114	99.13	-	-	-	-	-	-
Qualified Documents	679	100.0	678	99.85	-	-	1	.15	-	-	-	-
Non Qualified Documents	35	100.0	35	100.0	-	-	-	-	-	-	-	-
*Totals	17,632	100.0	15186	86.12	2057	11.66	225	1.27	0	0	0	0

\*Total Basic count less Qualified and Non Qualified Basic Characterization.

Table: 3.1-1 ACTIVE DODISS LIMITED COORDINATED BASIC DOCUMENTS, 1979 (contd.)

Characteristics of Active Limited Coordinated Documents	QPL		Industrial Standards		Internat.* Standards		Military Handbooks		Federal Handbooks		USAF-ANA Standards	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Basic Documents	-	-	1	.021	12	.253	30	.633	-	-	42	.886
Revised Basic Document	1	.019	-	-	18	.359	10	.199	-	-	-	-
Amended Basic Document	1	.027	-	-	-	-	-	-	-	-	-	-
Slash Sheet Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Slash Sheet Revisions	-	-	-	-	-	-	-	-	-	-	-	-
Slash Sheet Amendments	-	-	-	-	-	-	-	-	-	-	-	-
Documents Used in Lieu of	-	-	-	-	-	-	-	-	-	-	-	-
Supplement	-	-	-	-	-	-	-	-	-	-	-	-
Notice	-	-	-	-	-	-	1	.869	-	-	-	-
Qualified Documents	-	-	-	-	-	-	-	-	-	-	-	-
Non Qualified Documents	-	-	-	-	-	-	-	-	-	-	-	-
Totals	2	.01	1	.005	30	.17	41	.23	0	0	42	.23

\*International Standardization Documents.

Table: 3.1-1 ACTIVE DODISS LIMITED COORDINATED BASIC DOCUMENTS. 1979 (contd.)

Characteristics of Active Limited Coordinated Documents	ANA Design Standards		AF-NAVY Aero-		USAF Specs.		Other Dept. Directives		Navy Aero naut. BIts		USAF Specs.	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Basic Documents	36	.759	-	-	-	-	-	-	4	.084	7	.147
Revised Basic Document	-	-	-	-	-	-	-	-	-	-	-	-
Amended Basic Document	-	-	-	-	-	-	-	-	-	-	1	.027
Slash Sheet Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Slash Sheet Revisions	-	-	-	-	-	-	-	-	-	-	-	-
Slash Sheet Amendments	-	-	-	-	-	-	-	-	-	-	-	-
Documents Used in Lieu of	-	-	-	-	-	-	-	-	-	-	-	-
Supplement	-	-	-	-	-	-	-	-	-	-	-	-
Notice	-	-	-	-	-	-	-	-	-	-	-	-
Qualified Documents	-	-	-	-	-	-	-	-	-	-	-	-
Non Qualified Documents	-	-	-	-	-	-	-	-	-	-	-	-
Totals	36	.20	0	0	0	0	0	0	4	.02	8	.04



Table: 3.1-1A NUMBER OF ACTIVE BASIC DODISS DOCUMENTS				
Document Category	1978	1979	Change	
			No.	Pct.
Military Specifications	27,299	27,470	171	.62
Military Standards	6,846	6,858	12	.175
Federal Specifications	3,086	3,041	-45	-1.45
Federal Standards	65	81	16	24.6
Federal Information Proc. Stds(FIPS)	35	39	4	11.42
Qualified Products Lists	1,653	1,563	-90	-5.43
Industry Standards	1,434	1,739	305	21.19
International Standards	1,088	1,152	64	5.88
Military Handbooks	121	126	5	4.13
USAF ANA Standards	556	546	-10	-1.79
ANA Design Standards	90	88	-2	-2.2
Other Dept. Directives	9	9	0	0
Navy Aero Bult.	16	17	1	6.25
USAF Design Standards	8	8	0	0
Total	42,306	42,737	431	1.018

\* As of July 1978 and July 1979

Source: DODISS STATISTICAL SUMMARY REPORT

Table 3.1-2

The combined total of fully coordinated and limited coordinated basic documents, listed by document category, totaling 42,738 line items. Document categories not listed were inactive as of July 1979.

Table 3.1-3

The DODISS Statistical Summary Report for 1978 and 1979 was the source of information for the number of new document basics entered into the DODISS.

In 1979, 1,535 new document basics were received for introduction to the DODISS. The net increase totaled 573 basics, and was a 38.9% increase over new basic receipts in 1978.

The estimated number of addendum documents is projected to illustrate the aggregate affect of new basic line item receipts. Overall, for each of the 1,535 documents received in 1979, an estimated .31 addendum line items will be generated throughout the basic documents active term.

Table 3.1-4

The cumulative total cancellation of basic documents since 1963 is reported in the DODISS Statistical Summary Report.

Cancellations for the period July 1978 to July 1979 are provided for each document category. During this period, a total of 962 basic documents were deleted from the active stock as a result of cancellation. The aggregate reduction in line items amounted to 1,453 basic and addendum documents, with addendums accounting for 493 or 33.9% of the line items.

Table 3.1-5

Warehouse controlled documents not listed in the DODISS number 21,600

Table: 3.1-2 SUMMARY OF DODISS DOCUMENT BASICS (1979)

Document Category *	Pct. of Total Basics	Fully Coordinated	Limited Coordinated	Total
Military Specification	64.30	12,284	15186	27,470
Military Standards	16.04	4,801	2057	6,858
Federal Specification	7.11	2,816	225	3,041
Federal Standards	.19	81	0	81
Federal Info. Proc. Stas. (FIPS)	.09	39	0	39
Qualified Products Lists (QPL)	3.66	1,563	2	1,565
Industry Standards	4.06	1,737	1	1,738
International Standards	2.70	1,122	30	1,152
Military Handbooks	.30	85	41	126
USAF-ANA Standards	1.28	504	42	546
ANA Design Standards	.20	52	36	88
Other Dept. Directives	.02	9	0	9
Navy Aero-nautical Blts.	.03	13	4	17
USAF Specification	.01	0	8	8
Totals	100	25,106	17,632	42,738

\*Categories not listed were inactive as of July 1979.

Table: 3.1-3 NUMBER OF NEW BASIC DOCUMENTS				
Document Category	1978	1979	Net Increase in Basic Documents-1979	Estimated Addendum Documents Per. Basic
Military Specifications	868	650	162	353
Military Standards	73	96	19	14
Federal Specifications	137	92	-165	76
Federal Standards	4	20	14	3
Federal Information Processing Standards	3	4	4	1
Qualified Products Lists	18	27	-80	+
Industry Standards	280	551	549	+
International Standards	79	91	75	28
Military Handbooks	9	4	4	0
Totals	1,471	1,535	573	475

+ Less than one addendum document

Table: 3.1-4 NUMBER OF DOCUMENTS CANCELLED					
Document Category	1979 *	1978 *	1979 Cancellations		
			Basics	Est. Addendum	Total
Military Specs.	17,694	17,206	488	265	753
Military Standards	4,124	4,047	77	11	88
Federal Specs.	2,324	2,067	257	211	468
Federal Standards	209	203	6	1.0	7.0
Qualified Prod. Lists	1,260	1,153	107	- +	107
Industry Standards	38	36	2	- +	
Internat. Standards	72	56	16	5	21
Military Handbooks	28	28	0	0	0
Federal Handbooks	2	2	0	0	0
USAF ANA Standards	662	653	9	0	9
ANA Design Standards	128	128	0	0	0
AF Navy Aero. Specs	22	22	0	0	0
USAF Specs.	17	17	0	0	0
Other Dept. Dir.	23	23	0	0	0
Navy-Aero NAV Blts.	51	51	0	0	0
USAF Specs. Bulbs	57	57	0	0	0
Total	26,711	25,749	962	493	1453

\* Cumulative Cancellations Since 1963.

+ Less than one associated document cancelled.

Table: 3.1-5 ESTIMATED NUMBER OF NON-DODISS DOCUMENTS				
Document Category	1976	1977	1978	Average Per Year
NAVAIRS Aero Letters	20,000	11,800	9,400	13,733
Data Item Descriptions	2,400	2,300	2,400	2,367
Navy Dept. Directives	9,400	8,300	8,700	8,800
DOD Dept. Directives	1,600	1,500	1,100	1,400
Totals	33,400	23,900	21,600	26,300

Source: NPFC Annual Reports

line items and consist of NAVAIRS, NAVINST, DID, and DOD Directives. Since 1976 there has been a steady decline in the number of non-DODISS line items stocked, with the most substantial decline occurring in the number of NAVAIR-AERO letter line items.

Table 3.1-6

The estimated number of basic document addendums is provided for each document category.

The estimated number of document addendums is 18,841 or 29.3% of the aggregate number of DODISS Listed documents. Military Specifications account for 14,895 or 79.0% of the addendums, with Federal Specifications addendums numbering 2,502 or 13.3%.

The cumulative total number of warehouse controlled document is 83,128, including DODISS Listed basic documents, associated addendum line items and Non-DODISS listed documents.

Table: 3.1-6 ESTIMATED BASICS ASSOCIATED DOCUMENT LINE ITEMS.

Document Category	Total Basic Line Items	Supple-ments per 1000 L/I	Notices per 1000 L/I	Addenums per 1000 L/I	Interim Amnds. per 1000 L/I	Amend-ments per 1000 L/I	Slash Sheets per 1000 L/I	Change Notice per 1000 L/I	Total Basic Assoc. L/I	Percent of Doc. Category	Total of Document Category
Military Specifications	27,470	4.50	2.20	.82	4.70	323.0	207.0	-	14,895	54.2	42,365
Military Standards	6,858	-	3.0	-	-	-	79.0	55.0	940	13.7	7,798
Federal Specifications	3,041	6.2	6.2	-	53.8	315.9	440.2	-	2,502	82.2	5,543
Federal Standards	81	-	-	-	-	103.1	-	126.	19	23.45	100
Federal Info. Proc. STDS. (FIPS)	39	-	-	-	-	-	-	-	0	0	39
QPL'S	1,563	-	.13	.05	-	1.2	-	-	2.0	.12	1,565
Industry Standards	1,739	-	.90	-	-	-	51.0	-	91.0	5.23	1,829
International Standards	1,152	-	-	-	-	330.	-	-	380	32.98	1,482
Military Handbooks	126	-	20.8	-	-	-	-	76.3	12.0	9.52	138
USAF-ANA Design Standards	546	-	-	-	-	-	-	-	0	0	546



Table: 3.1-6 ESTIMATED BASICS ASSOCIATED DOCUMENT LINE ITEMS (cont'd).											
Document Category	Total Basic Line Items	Supple-ments per 1000 L/I	Notices per 1000 L/I	Addenums per 1000 L/I	Interim Amnds. per 1000 L/I	Amend-ments per 1000 L/I	Slash Sheets per 1000 L/I	Change Notice per 1000 L/I	Total Basic Assoc. L/I	Percent of Doc. Category	Total of Document Category
ANA Design Standards	88	-	-	-	-	-	-	-	0	0	88
Other Department Directives	9	110.0	-	-	-	-	-	-	-	1.0	10
Navy Aero Bulletins	17	-	-	-	-	-	-	-	-	0	17
USAF Spec-ification Bulletins	8	-	-	-	-	-	-	-	-	0	8
NAVAIR Tech. Directives	9,400	-	-	-	-	-	-	-	-	0	9,400
Navy Instruct.	8,700	-	-	-	-	-	-	-	-	0	8,700
DOD Directives	1,100	-	-	-	-	-	-	-	-	0	1,100
Data Item Description	2,400	-	-	-	-	-	-	-	-	0	2,400
Totals	64,337								18,841	29.28	83,128

## 3.2 DISPOSAL OF WAREHOUSE CONTROLLED DOCUMENTS

### 3.2.1 Introduction

This section attempts to develop an estimate of the total volume of document disposal activity for the warehouse controlled documents managed by NPFC. This estimation of the disposal volume is based on the information such as the number of documents cancelled, number of basic documents revised and an assumption that a certain percent of the average replenishment quantity is disposed of.

### 3.2.2 Data Collection and Methodology

At the time of the analysis, NPFC did not have a specific mechanism for separately identifying and capturing pertinent information for estimating the disposal volume for warehouse controlled documents. The disposal measurement records maintained by NPFC report only the aggregate volume of material turned over to waste paper recovery contractors. These records, maintained by the Freight Terminal Division (Code 306), indicate the volume of paper disposed by type and weight. The volume of dry strength paper disposal encompassed warehouse controlled documents, NPSSO scrap and discarded publications and forms. As a consequence, it was not possible to determine the proportional gross weight attributable to warehouse controlled documents.

Examination of Material Department (Code 300) production records provided a measure of hours allocated to the disposal of documents, but did not indicate the associated volumes or document categories.

Examination of Inventory Department (Code 100) production records provided only a total of basic document cancellations. Cancellations are one major cause of disposal actions and from this information it was possible to estimate the number of basic documents and addendum line items disposed. This information provided a basis for estimating overall disposal quantities resulting from document cancellations.

In addition to cancellations, the receipt of superseding or revised basic documents initiates a disposal action. The number of basic documents cancelled and disposed due to document supersession or revision is not recorded by NPFC. Examination of procurement record cards and the DODISS Statistical Summary Report for July 1979 provided a basis for estimating the number of basic documents revised in an average year. The total quantity of documents disposed of due to the receipt of a revised basic was estimated and added to total cancellations to provide an estimate of aggregate document disposal. It was not possible to obtain substantive data that would support estimates of superseded documents disposal and, as a consequence, this cause of disposal action is not included in the estimate.

### 3.2.3 Summary of Results

Table 3.2-1 provides an estimate of disposal quantities for warehouse controlled documents for the 12-month period between July 1978 through July 1979.

Estimates are based on the disposal of cancelled and revised basic documents. Information on the number of cancelled basic documents was developed from the DODISS Statistical Summary Reports dated July 1978 and July 1979. The estimated number of revised basic documents by document category was also developed from the same summary reports. Average replenishment quantities are based on a sampling of 574 procurement record cards performed during Phase I of the study effort.

The estimated quantity of pages disposed is determined by multiplying the quantity of documents disposed by the average number of pages per document for each of the document categories.

One of the principal variables for estimating the disposal volume is the average number of copies discarded at the time of disposal. Since this information was not easily obtainable, an assumption was made for the magnitude of this variable. It was assumed that the average number of

disposal copies varied between 25% and 50% of the total replenishment quantity by document category. This assumption provided a basis for establishing the range for disposal volumes.

#### 3.2.4 Examination of Cancelled Documents Procurement Records

Table 3.2-2 provides a summary of findings developed from a sampling of the Procurement Records of cancelled documents.

The Procurement Records of 353 cancelled documents were examined in order to improve the analysis of warehouse-controlled document disposal. The information available for extraction from the records did not provide the required basis for quantifying the actual disposal volume. This was because of the fact that the disposed quantities were not recorded, and that the yearly document usage patterns varied extensively over the life cycle of an average document. Based on these findings, it is recommended that NPFC initiate a collection procedure that will capture the required data at the point of disposal.

Table 3.2-1 Estimated Volume of Document Disposal

DOCUMENT CATEGORY	BASIC DOCUMENTS CANCELED	ESTIMATE OF BASIC DOCUMENTS REVISED	TOTAL NUMBER OF DOCUMENTS CANCELED AND REVISED	AVERAGE REPLENISHMENT QUANTITY	ESTIMATED QUANTITY OF DOCS. DISPOSED		AVERAGE NO. OF PAGES PER L/I	ESTIMATED QUANTITY OF PAGES ALL DOCS. DISPOSED	
					25%	50%		25%	50%
MILITARY SPECIFICATIONS	488	1,021	1,059	377.4	99,917	199,833	15.6	1,558,705	3,117,410
MILITARY STANDARDS	77	575	652	474.1	77,278	154,833	29.3	2,264,254	4,528,508
FEDERAL SPECIFICATIONS	257	172	429	556.9	59,728	119,455	11.9	710,758	1,421,515
FEDERAL STANDARDS	113	3	116	160	4,640	9,280	4.4	20,416	40,832
QUALIFIED PRODUCTS LISTS	2	170	172	340.9	14,659	29,317	3.1	45,442	90,884
INDUSTRY STANDARDS	16	3	19	263.	1,249	2,499	5.7	7,121	14,241
INTERNATIONAL STANDARDS	-	29	29	400	2,900	5,800	29	84,100	168,200
MILITARY HANDBOOK	-	5	5	400	500	1,000	200	100,000	200,000
USAF-ANA STD	9	-	9	200	450	900	29	13,050	26,100
NAVY AERO-BULLETIN	-	.4	.4	400	40	80	3	120	240
TOTALS	962	1,978.4	2940.4		261,361	522,727		4,803,966	9,607,932

TABLE 3.2-2 SUMMARY OF CANCELLED DOCUMENT PROCUREMENT RECORDS

Document Category	Average Life of a Document, Years	Average Total* Stocked Quantity	Average Total* Repl. Stock Procured	Average Repl. Actions per Year**	Maximum Average Annual Useage***	Average Last Replishment Quantity	Elapsed Time-Last Replishment to Cancelltn.
Military Specifications	5.5	2,903	1,923	.38	530	834	4.3
Military Standards	3.6	2,239	474	.25	622	408	NA
Federal Specifications	7.0	1,209	806	.35	173	270	3.4
Federal Standards	8.0	906	462	.19	113	272	5.2
Qualified Products Lists	4.8	1,873	1,145	.53	394	660	3.0
Data Item Descriptions	4.6	1,115	794	.39	242	361	1.1
Navy Aero Bulletins	7.5	517	279	.13	69	279	NA
Navy Instructions	6.9	592	380	.22	86	215	1.9
USAF-ANA Standards	6.5	588	283	.17	91	233	2.5

N = 353

\*Over the life cycle of an average document.

\*\*\*Total stock quantity divided by average life of document.

\*\*For those documents that were replenished.

### 3.3 GEOGRAPHIC DISTRIBUTION OF DEMAND

#### 3.3.1 Introduction

This section provides information on the geographic distribution of routine orders and initial distribution subscribers for warehouse controlled documents. The routine orders distribution is based on the sampling of mail orders received at NPFC. The subscribers distribution was developed from address listings maintained by the NPFC List Maintenance Branch, (Code 3064).

The geographic regions utilized for the analysis are the seven naval districts (with accompanying states) and foreign classification for overseas demand. Exhibit 3.3-1 provide a map of the Naval Districts.

Estimates of annual aggregate demand are presented, based on the distribution patterns developed from the order sampling and examination of subscription listings.

#### 3.3.2 Data Sources and Methodology

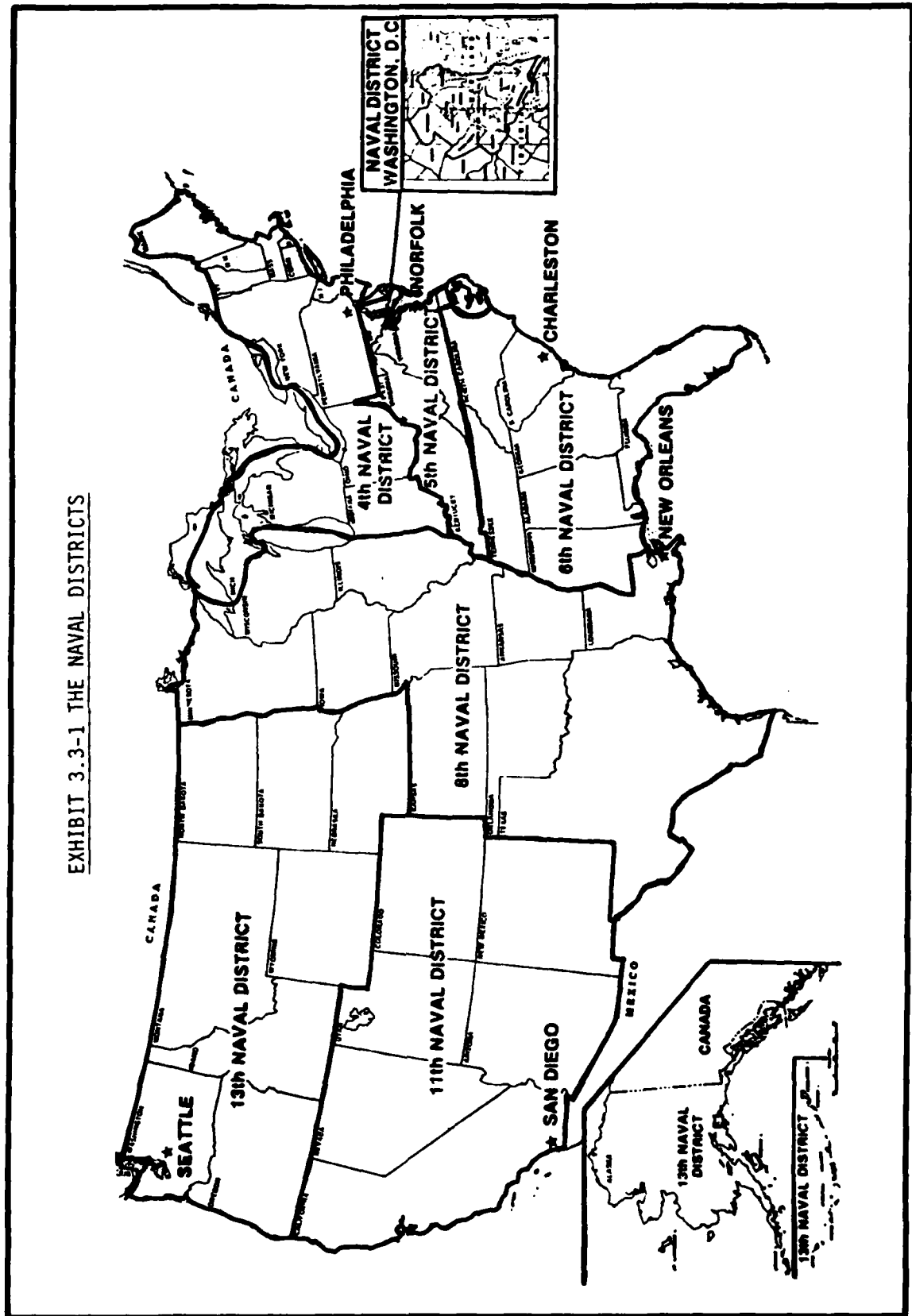
Subscribers for initially distributed documents and routine orders received at NPFC were identified as the two principal sources of demand for warehouse controlled documents.

Naval districts with encompassed states were selected as the basis for identifying the geographic distribution of demand.

Commercial subscribers were identified by a complete enumeration of address listings maintained by NPFC. Government subscribers, including Federal Civil and DOD agencies, State governments and assorted public organizations, were identified by a comprehensive examination of the appropriate address listings.

The lists of subscribers, maintained by NPFC, provided information on the geographic location (i.e., city and state) for 2,219 commercial and 1172 government addressees. Estimated demand quantity was derived from NPFC management reports on initial distributions. The sample of 800 orders provided the required geographic and demand quantity information for routine orders.

EXHIBIT 3.3-1 THE NAVAL DISTRICTS



SOURCE: NPPSO, December 1979.



The estimates of aggregate annual demand are projected for each naval district. Separate estimates were computed for initial distributions demand, routine orders and special projects and commissions. The geographic distribution for aggregate demand was developed using the data from subscription listings and sampled orders. The data on the quantity of documents distributed was extracted from NPFC initial distribution management reports. The annual quantity of documents distributed for routine orders was developed from information provided by NPFC. The projected demand quantities are based on information provided by NPFC.

### 3.3.3 Summary of Results

The analysis of the geographic distribution of demand is presented in the following tables:

Table 3.3-1 Distribution of Orders and Commercial Subscribers  
by Naval District and State

Table 3.3-2 Distribution of Special Projects Demand by Naval  
District and State

Table 3.3-3 Rank Distribution of Orders and Commercial Subscribers  
by State

Table 3.3-4 Geographic Distribution of Government Subscribers by  
Naval District and State

Table 3.3-5 Geographic Distribution of Initial Distribution Demand  
(FY 1979)

Table 3.3-6 Estimated Demand By Naval District, Routine Orders (Mail)

Table 3.3-7 Estimated Demand By Naval District, Routine Orders (Phone)

Table 3.3-8 Geographic Distribution of Annual Aggregate Demand For  
Warehouse Controlled Documents

Table: 3.3-1 <u>DISTRIBUTION OF ORDERS* AND SUBSCRIBERS</u> <u>BY NAVAL DISTRICT AND STATE</u>				
NAVAL DISTRICT AND STATE	Mail Orders		Commercial Subscription Lists	
	NUMBER OF ORDERS	PERCENT OF TOTAL ORDERS	NUMBER OF LISTINGS	PERCENT OF TOTAL LISTINGS
Washington DC				
Naval district	15	1.87	35	1.57
Total	<hr/>	<hr/>	<hr/>	<hr/>
	15	1.87	35	1.57
4th Naval District				
Maine	24	3.0	80	3.60
Vermont	4	.50	2	.09
New Hampshire	7	.87	15	.67
Massachusetts	21	2.62	80	3.60
Connecticut	25	3.12	62	2.80
Rhode Island	5	.62	12	.54
New York	105	13.12	206	9.28
New Jersey	49	6.12	186	8.38
Pennsylvania	45	5.62	210	9.46
Delaware	4	.50	12	.54
Ohio	25	3.12	148	6.66
Indiana	6	.75	10	.45
Michigan	15	1.87	36	1.62
Total	<hr/> 335	<hr/> 41.88	<hr/> 1054	<hr/> 47.72
5th Naval District				
Virginia	43	5.37	47	2.11
Maryland	22	2.75	84	3.78
West Virginia	1	.12	4	.40

\*Routine Mail Orders for Warehouse Controlled Documents

Table: 3.3-1 DISTRIBUTION OF ORDERS AND SUBSCRIBERS  
BY NAVAL DISTRICT AND STATE (CONTD)

NAVAL DISTRICT AND STATE	Mail Orders		Commercial Subscription Lists	
	NUMBER OF ORDERS	PERCENT OF TOTAL ORDERS	NUMBER OF LISTINGS	PERCENT OF TOTAL LISTINGS
Kentucky	-	-	9	.40
Total	<u>66</u>	<u>8.25</u>	<u>144</u>	<u>6.48</u>
6th Naval District				
North Carolina	3	.37	20	.90
South Carolina	3	.37	26	1.17
Tennessee	7	.87	22	.99
Mississippi	2	.25	13	.58
Alabama	9	1.12	14	.63
Georgia	12	1.50	20	.90
Florida	40	5.0	59	2.65
Total	<u>76</u>	<u>9.50</u>	<u>174</u>	<u>7.84</u>
8th Naval District				
Louisiana	2	.25	12	.54
Arkansas	4	.50	5	.22
Oklahoma	5	.62	-	-
Texas	38	4.75	76	3.42
Kansas	6	.75	14	.63
Missouri	11	1.37	24	1.08
Illinois	31	3.87	84	3.78
Iowa	4	.50	46	2.07
Wisconsin	14	1.75	28	1.26

Table: 3.3-1 DISTRIBUTION OF ORDERS AND SUBSCRIBERS  
BY NAVAL DISTRICT AND STATE (CONTD)

NAVAL DISTRICT AND STATE	Mail Orders		Commercial Subscription Lists	
	NUMBER OF ORDERS	PERCENT OF TOTAL ORDERS	NUMBER OF LISTINGS	PERCENT OF TOTAL LISTINGS
Minnesota	24	3.0	23	1.03
Total	<u>139</u>	<u>17.37</u>	<u>312</u>	<u>14.06</u>
11th Naval District				
Colorado	9	1.12	12	.54
New Mexico	5	.62	-	-
Arizona	7	.87	12	.54
Utah	3	.37	5	.22
Nevada	1	.12	1	.04
California	105	13.12	284	12.79
Total	<u>130</u>	<u>16.25</u>	<u>314</u>	<u>14.15</u>
13th Naval District				
Montana	2	.25	-	-
North Dakota	-	-	-	-
South Dakota	-	-	1	.04
Nebraska	1	.12	3	.13
Wyoming	1	.12	-	-
Idaho	-	-	10	.45
Washington	22	2.75	10	.45
Oregon	2	.25	-	-
Alaska	1	.12	-	-
Hawaii	2	.25	1	.04
Total	<u>31</u>	<u>3.87</u>	<u>25</u>	<u>1.12</u>

Table: 3.3-1 DISTRIBUTION OF ORDERS AND SUBSCRIBERS  
BY NAVAL DISTRICT AND STATE (CONTD)

NAVAL DISTRICT AND STATE	Mail Orders		Commercial Subscription Lists	
	NUMBER OF ORDERS	PERCENT OF TOTAL ORDERS	NUMBER OF LISTINGS	PERCENT OF TOTAL LISTINGS
Foreign Nations Total	$\frac{8}{8}$	$\frac{1.0}{1.0}$	$\frac{156}{156}$	$\frac{7.0}{7.0}$
TOTALS	800	100	2,219	100

TABLE 3.3-2      DISTRIBUTION OF SPECIAL PROJECTS DEMAND BY NAVAL DISTRICT AND STATE      (1979)			
NAVAL DISTRICT AND STATE	SPECIAL PROJECTS		APPORTIONED* QUANTITY OF DOCUMENTS
	NO. OF ORDERS	PCT OF ALL ORDERS	
<u>Washington, D. C.</u>	30	7.77	79,919
Naval District	—	—	—
Total	30	7.77	79,919
<u>4th Naval District</u>			
Main			
Vermont			
New Hampshire			
Massachusetts	10	2.59	26,640
Connecticut	8	2.0	20,571
Rhode Island	4	1.03	10,594
New York	14	3.62	37,234
New Jersey	27	6.99	71,897
Pennsylvania	65	16.83	173,107
Delaware	1	.259	2,664
Ohio	13	3.36	34,560
Indiana	5	1.29	13,268
Michigan	5	1.29	13,268
Total	152	39.37	403,803

\*Total Quantity count (not Line items)

TABLE 3.3-2 <u>DISTRIBUTION OF SPECIAL PROJECTS DEMAND</u> <u>BY NAVAL DISTRICT AND STATE (1979) (CONT'D)</u>			
NAVAL DISTRICT AND STATE	SPECIAL PROJECTS		APPORTIONED* QUANTITY OF DOCUMENTS
	NO. OF ORDERS	PCT OF ALL ORDERS	
<u>5th Naval District</u>			
Virginia	26	6.73	69,222
Maryland	24	6.21	63,874
W. Virginia	—	—	—
Kentucky	4	1.03	10,594
Total	54	13.98	143,690
<u>6th Naval District</u>			
North Carolina	—	—	—
South Carolina	1	.259	2,664
Tennessee	1	.259	2,664
Mississippi	1	.259	2,664
Alabama	6	1.55	15,947
Georgia	6	1.55	15,947
Florida	13	3.36	34,560
Total	28	7.25	74,446
<u>8th Naval District</u>			
Louisiana	2	.518	5,328
Arkansas	—	—	—
Oklahoma	1	.259	2,664

\*Total Quantity count (not Line items)

TABLE 3.3-2 DISTRIBUTION OF SPECIAL PROJECTS DEMAND  
BY NAVAL DISTRICT AND STATE (1979) (CONT'D)

NAVAL DISTRICT AND STATE	SPECIAL PROJECTS		APPORTIONED* QUANTITY OF DOCUMENTS
	NO. OF ORDERS	PCT OF ALL ORDERS	
Texas	11	2.84	29,211
Kansas	—	—	—
Missouri	9	2.33	23,966
Illinois	6	1.55	15,943
Iowa	2	.518	5,328
Wisconsin	—	—	—
Minnesota	4	1.03	10,594
<u>11 Naval District</u>			
Colorado	3	.77	7,920
New Mexico	3	.77	7,920
Arizona	9	2.33	23,966
Utah	7	1.81	18,617
Nevada	1	.259	2,664
California	42	10.88	111,908
	65	16.83	172,995
<u>13th Naval District</u>			
Montana	—	—	—
North Dakota	—	—	—
South Dakota	—	—	—
Nebraska	1	.259	2,664
Wyoming	—	—	—

\*Total Quantity count (not Line items)



TABLE 3.3-2 <u>DISTRIBUTION OF SPECIAL PROJECTS DEMAND</u> <u>BY NAVAL DISTRICT AND STATE (1979) (CONT'D)</u>			
NAVAL DISTRICT AND STATE	SPECIAL PROJECTS		APPORTIONED* QUANTITY OF DOCUMENTS
	NO. OF ORDERS	PCT OF ALL ORDERS	
Idaho	—	—	—
Washington	4	1.03	10,594
Oregon	—	—	—
Alaska	—	—	—
Hawii	—	—	—
Total	5	1.29	13,258
Foreign	17	4.40	45,257
Total	17	4.40	45,257
TOTALS	—	100	1,026,402

Table: 3.3-3 RANK DISTRIBUTION OF ORDERS AND SUBSCRIBERS BY STATE

STATE	Mail Orders			Commercial Subscription List		
	Total Orders	Percent	Rank	Total List	Percent	Rank
California	105	13.12	1	284	12.79	1
New York	105	13.12	1	206	9.28	2
New Jersey	49	6.12	2	186	8.38	4
Pennsylvania	45	5.62	3	210	9.46	3
Virginia	43	5.37	4	47	2.11	11
Florida	40	5.0	5	59	2.65	10
Texas	38	4.75	6	76	3.42	8
Illinois	31	3.87	7	84	3.78	6
Connecticut	25	3.12	8	62	2.80	9
Ohio	25	3.12	8	148	6.66	5
Minnesota	24	3.0	9	23	1.03	17
Maine	24	3.0	9	80	3.60	7
Maryland	22	2.75	10	84	3.78	6
Washington	22	2.75	10	10	.45	25
Massachusetts	21	2.62	11	80	3.60	7
Michigan	15	1.87	12	36	1.62	13
Washington	15	1.87	12	35	1.57	14
Wisconsin	14	1.75	13	28	1.26	15
Georgia	12	1.50	14	20	.90	19
Missouri	11	1.37	15	24	1.08	18
Alabama	9	1.12	16	14	.63	22
Colorado	9	1.12	16	12	.54	23
Tennessee	7	.87	17	22	.99	19
Arizona	7	.87	17	12	.54	23
New Hampshire	7	.87	17	15	.67	21
Indiana	6	.75	18	10	.45	25
Kansas	6	.75	18	14	.63	22
Rhode Island	5	.62	19	12	.54	23
New Mexico	5	.62	19	--	--	--
Oklahoma	5	.62	19	--	--	--

Table: 3.3-3 RANK DISTRIBUTION OF ORDERS AND SUBSCRIBERS BY STATE (contd)

STATE	Mail Orders			Commercial Subscription List		
	Total Orders	Percent	Rank	Total List	Percent	Rank
Vermont	4	.50	20	2	.09	30
Delaware	4	.50	20	12	.54	23
Arkansas	4	.50	20	5	.22	27
Iowa	4	.50	20	46	2.07	12
Utah	3	.37	21	5	.22	27
North Carolina	3	.37	21	20	.90	20
South Carolina	3	.37	21	26	1.17	16
Montana	2	.25	22	--	--	--
Oregon	2	.25	22	--	--	--
Hawaii	2	.25	22	1	.04	31
Mississippi	2	.25	22	13	.58	23
Louisiana	2	.25	22	12	.54	24
West Virginia	1	.12	23	4	.180	28
Nevada	1	.12	23	1	.04	31
Nebraska	1	.12	23	3	.13	29
Wyoming	1	.12	23	--	--	--
Alaska	1	.12	23	--	--	--
Kentucky	0	--	--	9	.40	26
North Dakota	0	--	--	--	--	--
South Dakota	0	--	--	1	.04	31
Idaho	0	--	--	--	--	--
Foreign Nations	8	1.0	--	156	7.0	--
			100		100	

TABLE: 3.3-4 GEOGRAPHIC DISTRIBUTION OF GOVERNMENT SUBSCRIBERS  
BY NAVAL DISTRICT AND STATE: (1979)

NAVAL DISTRICT AND STATE	GOVERNMENT SUBSCRIBERS		APPORTIONED QUANTITY OF DOCUMENTS
	NO. OF LISTINGS	PCT. OF TOTAL LISTINGS	
Washington, D. C.	62	5.3	139,677
Naval District	—	—	
Total	62	5.3	
4th Naval District			271,242
Main	15	1.3	
Vermont	—	—	
New Hampshire	4	.3	
Massachusetts	11	.9	
Connecticut	9	.8	
Rhode Island	2	.2	
New York	163	13.9	
New Jersey	27	2.3	
Pennsylvania	42	3.6	
Delaware	6	.5	
Ohio	18	1.5	
Indiana	19	1.6	
Michigan	5	.4	
Total	321	27.4	
5th Naval District			239,823
Virginia	71	6.0	
Maryland	28	2.5	
West Virginia	4	.3	
Kentucky	4	.3	
Total	107	9.1	

TABLE: 3.3-4 GEOGRAPHIC DISTRIBUTION OF GOVERNMENT SUBSCRIBERS  
BY NAVAL DISTRICT AND STATE. (1979) (CONT'D)

NAVAL DISTRICT AND STATE	GOVERNMENT SUBSCRIBERS		APPORTIONED QUANTITY OF DOCUMENTS
	NO. OF LISTINGS	PCT. OF TOTAL LISTINGS	
6th Naval District			
North Carolina	13	1.1	
South Carolina	26	2.2	
Tennessee	7	.6	
Mississippi	8	.7	
Alabama	16	1.4	
Georgia	21	1.8	
Florida	44	3.8	
Total	<u>135</u>	<u>11.5</u>	303,073
8th Naval District			
Louisiana	7	.6	
Arkansas	10	.9	
Oklahoma	12	1.0	
Texas	61	5.2	
Kansas	9	.8	
Missouri	16	1.4	
Illinois	26	2.2	
Iowa	—	—	
Wisconsin	4	.3	
Minnesota	14	1.2	
Total	<u>159</u>	<u>13.7</u>	358,417
11th Naval District			
Colorado	7	.6	
New Mexico	10	.9	

TABLE: 3.3-4 GEOGRAPHIC DISTRIBUTION OF GOVERNMENT SUBSCRIBERS  
BY NAVAL DISTRICT AND STATE. (1979) (CONT'D)

NAVAL DISTRICT AND STATE	GOVERNMENT SUBSCRIBERS		APPORTIONED QUANTITY OF DOCUMENTS
	NO. OF LISTINGS	PCT. OF TOTAL LISTINGS	
Arizona	15	1.3	666,761
Utah	7	.6	
Nevada	4	.3	
California	254	21.8	
Total	<u>297</u>	<u>25.4</u>	
13th Naval District			179,210
Montana	5	.4	
North Dakota	7	.6	
South Dakota	3	.2	
Nebraska	4	.3	
Wyoming	4	.3	
Idaho	3	.2	
Washington	20	1.7	
Oregon	4	.3	
Alaska	1	.08	
Hawaii	28	2.4	
Total	<u>79</u>	<u>6.6</u>	
Foreign Nations	<u>12</u>	<u>1.0</u>	26354
Total	12	1.0	
TOTALS	1172	100	2,635,420

TABLE 3.3-5 GEOGRAPHIC DISTRIBUTION OF INITIAL DISTRIBUTION DEMAND (FY 1979)												
Naval District	Subscribers				Aggregate Demand		Estimated Quantity of Documents			No. of Pages		
	Commercial		Government*		No.	Pct.	Comm.	Govt.	Total	Comm.	Govt.	Total
	No.	Pct.	No.	Pct.								
Washington	35	1.7	62	5.3	97	3.0	9,667	139,677	149,344	142,105	2053,252	2195,358
4th	1,054	47.7	321	27.4	1,375	40.5	271,242	722,105	993,347	3987,257	10614944	14602201
5th	144	6.5	107	9.1	251	7.5	36,962	239,823	276,785	543,341	3525,399	4068740
6th	174	7.8	135	11.5	309	9.1	44,354	303,073	347,427	652,004	4455,173	5107,177
8th	312	14.0	159	13.6	471	13.9	79,610	358,417	438,027	1,170,267	5268,720	6438,997
11th	314	14.2	297	25.3	611	18.0	80,746	666,761	747,507	1,186,966	9801387	10988,353
13th	25	1.1	79	6.8	104	3.0	6,255	179,210	185,465	91,949	2634,387	2726,336
Foreign	156	7.0	12	1.0	168	5.0	39,805	26,354	66,159	585,134	387,404	972,537
TOTAL	2,219	100	1,172	100	3,391	100	568,641	2,635,420	3,204,061	8359,023	38740675	47099698

\*Government: Federal civil and DOD Agencies, State Governments and Assorted Public Organizations.

Table: 3.3-6 ESTIMATED ANNUAL DEMAND BY NAVAL DISTRICT AND DOCUMENT CATEGORY (ROUTINE MAIL ORDERS)

Document Category	Avg. No. Pgs.	Quantity Demanded	Total Pages (1000)	Number of Pages by Naval District... (1000)						
				4th	5th	6th	8th	11th	13th	Wash. D.C. Foreign
Military Specifications	15.6	1,005,126	15,680.0	6,566.8	1,293.6	1,489.6	2,723.6	2,548.0	606.8	293.2 156.8
Military Standards	29.3	1,157,832	33,924.5	14,207.5	2,798.8	3,222.8	5,892.7	188.1	1312.9	634.4 11.6
Data Item Descriptions	2.3	58,599	134.8	56.4	11.1	12.8	23.4	9.5	5.2	2.5 1.3
Qualified Products Lists	3.1	111,736	346.4	145.0	28.6	32.9	60.2	18.2	13.4	6.5 3.5
Military* Handbooks	** 200.0	62,075	12,145.0	5,199.4	1,024.2	1,179.4	2,156.5	2,017.4	480.5	232.2 124.1
Navy Instructions	13.8	308,444	4,256.5	1,782.6	351.2	404.4	739.4	691.7	164.7	79.6 42.5

\* Totals Rounded

\*\* Estimated



Table: 3.3-6 ESTIMATED ANNUAL DEMAND BY NAVAL DISTRICT AND DOCUMENT CATEGORY (ROUTINE MAIL ORDERS) (CONT'D)												
Document Category	Avg. No. Pgs.	Quantity Demanded	* Total Pages (1000)	Number of Pages by Naval District. (1000)								Foreign
				4th	5th	6th	8th	11th	13th	Wash.DC.		
NAVAIRS	3.0	169,424	508.3	212.9	41.9	48.3	88.3	82.6	19.7	9.5	5.0	
Industry Standards	5.7	787	4.5	1.879	.37	.42	.78	.73	.17	.08	.04	
Federal Specifications	11.9	29,051	345.7	144.8	28.5	32.8	60.0	56.2	13.4	6.5	3.5	
Federal Standards	4.4	78,712	346.3	145.0	28.6	32.9	60.2	56.3	13.4	6.5	3.5	
Federal Handbook	** 200.0	6,296	1,259.2	527.4	103.9	119.6	218.7	204.6	48.7	23.5	12.6	
DOD Instruction	11.3	48,800	551.4	230.9	45.5	52.4	95.8	89.6	21.3	10.3	5.5	
Totals		3,009,687	69,772.6	29,221	5,756.2	6,628.4	12,119.5	11,338	2,700.2	1,304.7	697.7	

\*\*Estimated

Table 3.3-7 ESTIMATED ANNUAL DEMAND BY NAVAL DISTRICT,  
PHONE ORDERS

NAVAL DISTRICT	No. Of Orders	Total No. Of Documents *	Total No. Of Pages
Wash., D. C.	1,815	6,389	93,915
4th	40,658	143,116	2,103,808
5th	8,009	28,142	414,418
6th	9,222	32,461	477,183
8th	16,866	59,568	872,714
11th	15,774	55,524	816,210
13th	3,757	13,225	194,402
Foreign	972	3,421	50,295
Total	97,073	341,896	5,022,945

\* Based on the average number of line items and quantity per order.

TABLE 3.3-8 GEOGRAPHIC DISTRIBUTION OF ANNUAL AGGREGATE DEMAND (WAREHOUSE CONTROLLED DOCUMENTS)											
NAVAL DISTRICT	DOCUMENT QUANTITIES										
	Initial Distributions		Routine Orders		Special Projects		Document Totals		PAGE QUANTITY		Percent
	Number	Pages	Number	Pages	Number	Pages	Number	Percent	Number	Percent	
Washington, D.C.	149,344	2,195,358	60,536	1,398,615	79,919	1,174,809	289,826	3.8	4,768,782	3.5	
4th	993,347	14,602,201	1,401,165	31,324,808	403,802	5,935,904	2,798,315	36.9	51,862,913	37.9	
5th	276,785	4,068,740	277,946	6,170,618	143,699	2,112,243	698,421	9.3	12,351,601	9.0	
6th	347,427	5,107,177	318,381	7,105,582	74,446	1,094,356	740,254	9.8	13,307,116	9.7	
8th	438,027	6,433,997	583,254	12,992,210	93,034	1,367,600	1,114,315	14.7	20,798,811	15.1	
11th	747,507	10,908,353	546,103	12,154,210	172,995	2,543,027	1,466,603	19.3	25,665,590	18.8	
13th	185,465	2,726,336	130,603	2,894,602	13,253	194,893	329,326	4.3	5,815,831	4.2	
Foreign	66,159	972,537	33,518	747,996	45,257	665,278	144,931	1.9	2,385,610	1.8	
TOTAL	3,204,061	47,099,698	3,351,582	74,795,545	1,026,402	15,088,110	7,582,046	100	136,976,454	100	

\*Commissioning Actions accounted for an additional 253,000 Documents, on 3,792,600 pages.

Table 3.3-1

The geographic distribution of commercial subscribers and routine mail orders is shown by naval district and state. The number of orders and subscription listings for each state, with a cumulative total for each naval district is provided.

Examination of the table will indicate the significantly similar geographic distribution of demand for commercial subscribers and routine mail orders.

The majority of commercial subscribers are located in the 4th naval District, numbering 1054 listings or 47.72% of all subscribers. In addition, the largest number of mail orders originated from sources located in that district, accounting for 335 or 41.88% of all orders sampled.

Table 3.3-2

The geographic distribution of Special Projects for 1979, shown by naval district and state. The number of orders and apportioned quantity of documents for each state, with a cumulative total for each district, is provided.

Table 3.3-3

The ranked distribution of orders and subscribers, by state, indicates the distribution pattern similarity between the two major sources of demand. California and New York were the two principal states accounting for about a quarter of the total demand for both mail orders and subscribers. Mail orders were received from all but five states and subscribers were located in all but eight states.

Table 3.3-4

The geographic distribution of Government Initial distributions for 1979, is shown by Naval district and state. The distribution of addresses again reflects the predominance of the 4th naval district as the primary user of NPFC.

Table 3.3-5

The estimated initial distribution demand, allocated to the seven naval districts, was developed using the information extracted from subscription listings and NPFC production reports, on initial distribution for FY 1979.

The quantity of documents allocated to each naval district is proportionately equal to the number of subscribers located within the district. An aggregate total of 3,204,061 warehouse controlled documents, comprised of approximately 47,099,698 pages was distributed during FY 1979. The majority of these documents, 993,347, were distributed to subscribers located within the 4th naval district.

Table 3.3-6

The estimated demand quantities for each of the document categories by naval districts was developed from the sampling of mail orders.

The aggregate mail order demand of 3,009,687 documents, accounting for 69,772,600 pages, was allocated to naval districts on the basis of mail orders received from each district. The number of document copies attributed to each document category was developed from the same sample data.

Table 3.3-7

The projected number of phone orders and quantity of documents demanded was developed from data provided by NPFC. For the allocation of demand to naval districts, it is assumed that phone orders geographic distribution is comparable to the routine mail order distribution.

An estimated 97,073 orders for 341,896 documents were distributed among the seven naval districts and foreign sources. The number of pages distributed amounted to 5,022,945, and was based on a weighted average of pages for all document categories. The average number of document copies per line item and the average number of line items per request were developed from a sampling of 154 phone orders.

Table 3.3-8

This table provides an estimated annual aggregate demand for warehouse controlled documents using the information developed under each of the demand components discussed earlier. Initial distributions, routine orders and special projects accounted for a total demand of 7,582,046 document copies composed of 136,976,454 pages.

### 3.4 NPFC-DODISS DOCUMENT PREPARING ACTIVITY INTERFACE

#### 3.4.1 Introduction

This section presents an overview of the preparation and distribution functions of NPFC and the document preparing activities for warehouse controlled documents.

The functions of the preparing activities, which encompass the development of drafts, review and consequent coordination procedures, as specified by the Defense Specifications and Standards Program, are briefly summarized in this section.

The principal sponsors of NPFC warehouse controlled documents are identified and the results of interviews with five preparing activities are summarized.

NPFC procedural activities related to the introduction of a new basic document to the DODISS, coordination of the initial procurement, distribution, and maintenance of the required stock levels are also summarized.

#### 3.4.2 Data Collection and Methodology

The functions of the Document Preparing Activities are governed by the procedural requirements of the Defense Specifications and Standards Program listed in the DoD-Manual 4120.3-M. Preparing activities are required to initiate the development of document drafts in accordance with the applicable procedures, as described in DODSTD 4120.3-M. The composition of the actual document basic draft is specified in Military Standards 961 and 962.

Interviews with personnel from five preparing activities were conducted to determine compliance with the procedural regulations and to broadly characterize the process of document preparation. The preparing activities contacted were identified from the Standardization Directory, SD-1 (Dated April 1979).

The procedures associated with the receipt, processing and introduction of basic documents to the NPFC stock system were also reviewed.

An enumeration of basic documents by DODISS listed category and preparing activity service was compiled from the DODISS Statistical Summary Report dated July 1979. From the same report, the numbers of document custodians, users, and reviewers were extracted.

### 3.4.3 Summary of Results

An overview of the results in this area are presented in the following tables and exhibits:

Exhibit 3.4-1     An Overview of the Preparing Activities and NPFC Interface

Exhibit 3.4-2     Principal Preparing Activities for DODISS Listed Document Categories

Table 3.4-1     Number of Custodians, Users and Reviewers by Document Category

Table 3.4-2     Number of Active Line Items by Document Category and Preparing Activity Service

Exhibit 3.4-3     Preparing Activities Interviewed

Figure 3.4-1     NPFC Processing of Documents Received for Procurement

#### Exhibit 3.4-1

The exhibit provides an overview of the basic functions of Preparing Activities and NPFC for the maintenance and distribution of warehouse controlled documents.



EXHIBIT 3.4-1. AN OVERVIEW OF THE PREPARING ACTIVITIES AND NPFC  
INTERFACE

PREPARING ACTIVITY

- Responsible for the Preparation and Maintenance of Standardization Documents for Assigned Federal Supply Classifications
- Maintain Current Validity of Prepared Documents and Institute Required Revisions or Modifications of Document Content
- Maintain Current Coordination of Prepared Documents and Ensure Required Distribution of Developed Documents to Assigned Reviewing Activities
- Provide NPFC with Standardization Document Drafts that are in Compliance with Military Standards 961 and 962

NPFC ACTIVITY

- Responsible for the Initial Printing Procurement of Documents Received from Designated Preparing Activities
- Provide the Initial Distribution of Documents to Designated Users and Subscribers
- Maintain Document Stocks Adequate to Fulfill Requests and Replenish Documents Stocks as Required
- Distribute Associated Document Line Items and Notices as Required by Preparing Activities

The procedures and actions required of the preparing activities and NPFC are documented in the Defense Standardization Manual 4120.3-M: Defense Standardization and Specification Program Policies, Procedures and Instructions.

Exhibit 3.4-2

The principal preparing activities listed in this exhibit are organized by service branch and DOD organization. The listed activities were identified by NPFC staff as the principal sources of warehouse controlled documents. The addresses and service designations were obtained from the Standardization Directory SD-1 (dated April 1979) Examination of the Standardization Directory SD-1 will provide the FSC class and area assignments of the listed activities.

Table 3.4-1

The development of specification and standards documents requires the coordination of DOD and Federal Civil agencies designated by OUSDR&E\* as document custodians, users or reviewers. Table 3.4-1 provides the cumulative total, for each DODISS listed document category, of these coordinated participating activities. Examination of the table will indicate the complexity of the document preparation coordination process and the large number of activities involved in the development of a document. It should be recognized that substantial redundancy exists in the enumeration of activities, with the majority of organizations being concurrently listed as custodian, users or reviewers for individual line items and document categories.

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\*Office of Under Secretary of Defense for Research and Engineering

Exhibit 3.4-2 PRINCIPAL PREPARING ACTIVITIES  
FOR NPFC DODISS DOCUMENTS.

ARMY

Armament Research and Development Command: (AR)

Commander

U.S. Army Armament Research and Development Command  
Attn: DRDAR-TST-S  
Dover, NJ. 07801

Natick Research and Development Command: (GL)

Commander

U.S. Army Natick Research and Development Command  
Natick, MA. 01760

Materials and Mechanics Research Center

Director

U.S. Army Materials and Mechanics Research Center (MR)  
Attn: DRXMR-LS  
Watertown, MA. 02172

ARRADCOM, Aberdeen Proving Ground (ER)

Commander

U.S. Army Research and Development Command  
Attn: DRDAR-TSC-S  
Aberdeen Proving Ground, MD. 21010

Exhibit: 3.4-2 PRINCIPAL PREPARING ACTIVITIES FOR  
NPFC DODISS DOCUMENTS. (CONTD)

NAVY

Naval Air Systems Command (AS)

Commander

Naval Air Systems Command (AIR 52021)

Washington, D.C. 20361

Naval Electronics Systems Command (EC)

Commander

Naval Electronics Systems Command (ELEX 5043)

Washington, D.C. 20360

Naval Sea Systems Command (Ordnance Systems) (OS)

Commanding Officer

Naval Ordnance Station

Standardization and Documentation Division

Indian Head, MD. 20640

Naval Supply Systems Command (SA)

Commander

Naval Supply Systems Command

Washington, D.C. 20376

Exhibit: 3.4-2 PRINCIPAL PREPARING ACTIVITIES FOR  
NPFC DODISS DOCUMENTS. (CONTD)

AIR FORCE

International Standardization Office, HQ USAF (06)

Directorate of Plans/DCS P&O  
HQ USAF (AF/XOXXN-2)  
Washington, D.C. 20330

Aeronautical Systems Division, AFSC: (11)  
Standards Branch  
ASD/ENESS  
Wright-Patterson AFB, OH. 45433

Rome Air Development Center, AFSC (17)  
RADC (RBRD)  
Griffis AFB, N.Y. 13441

Directorate of Electronic Support AFLC (85)  
AFALD/PTS  
Wright-Patterson AFB, OH. 45433

AFLC Cataloging and Standardization Office (AFLC 99)  
AFLC CASO/LODS  
Federal Center  
Battle Creek, MI. 49016

Exhibit: 3.4-2 PRINCIPAL PREPARING ACTIVITIES FOR  
NPFC DODISS DOCUMENTS. (CONTD)

DEFENSE LOGISTICS AGENCIES

Defense Electronics Supply Center (ES)

Commander  
Defense Electronics Supply Center  
1507 Wilmington Pike  
Dayton, OH. 45444

Defense Industrial Plant Equipment Center (IP)

Commander  
Defense Industrial Plant Equipment Center  
Memphis, TN. 38114

Defense Personnel Support Center (DM)

Medical Items of Supply  
Attn: DPSC-ATTS  
2800 South 20th Street  
Philadelphia, PA. 19101

Table: 3.4-1 NUMBER OF CUSTODIANS, USERS, AND  
REVIEWERS BY DOCUMENT CATEGORY

DOCUMENT CATEGORY	Coordinated Participating Activities		
	CUSTODIANS	USERS	REVIEWERS
Military Specifications	23,215	26,415	68,573
Military Standards	7,829	6,992	18,875
Federal Specifications	6,009	4,605	7,614
Federal Standards	177	73	132
Federal Info. Proc. Std. (FIPS)	46	-	-
Qualified Products Lists	-	-	27
Industry Standards	3,196	561	2,517
International Standards	-	-	-
Military Handbooks	156	103	290
USAF - ANA Standards	716	60	732
ANA - Design Standards	54	14	20
Other Dept. Directives	6	1	4
Navy Aeronautical Bulletins	13	-	-
USAF Specification Bulletins	-	-	2

#### Table 3.4-2

The number of documents prepared by DOD service agencies are listed by DODISS document categories. Preparing activities within the Department of Army and Department of Navy are responsible for the development, coordination and maintenance of 33,221 or 74.86% of the DODISS basic documents stocked at NPFC.

Principal coordination responsibility for military and federal specifications and standards is assigned to preparing activities within the Army and Navy. Preparing activities of the Air Force and Defense Logistic Agencies are responsible for 25.14% of the basic documents and are the principal source of specialized document categories.

#### Exhibit 3.4-3

This exhibit lists preparing activities contacted for interviews by service branch and address.

Preparing activity staff indicated that the process of developing a draft document was dependent on the application of the document and the number of participating activities with initial review requirements.

The technical content of the documents is provided by contractors, government laboratories and assigned project committees. The overall function of the preparing activity is to ensure that the document is in compliance with the coordination and review requirements established by the DSSP and that the final document is prepared in accordance with the requirements of Military Standards 961 and 962.

The preparation of final document drafts is frequently contracted to private sector printers or delegated to specialized offices within the preparing activities. Equipment utilized in the preparation of final drafts includes 3M Lino-Lux word processing systems with floppy



Table: 3.4-2 *NUMBER OF ACTIVE LINE ITEMS BY DOCUMENT CATEGORY AND PREPARING ACTIVITY SERVICE											
Preparing Activity Service	Total		Military Specifications		Military Standards		Federal Specifications		Federal Standards		
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	
Army	17,914	40.37	12,438	42.87	2436	35.5	1582	50.55	37	45.66	
Navy	15,307	34.50	10,480	36.12	2434	35.48	568	18.15	10	12.34	
Air Force	8,175	18.42	4,258	14.68	1952	28.45	37	1.20	6	7.40	
DLA	2,979	6.71	1,839	6.33	37	0.57	942	30.10	28	34.6	
Total Document Basics	44,375	100.0	29,015	100	6859	100	3129	100	81	100	

Source: DODISS Statistical Summary Report  
 \* As of July 1979.

Table: 3.4-2 *NUMBER OF ACTIVE LINE ITEMS BY DOCUMENT CATEGORY AND PREPARING ACTIVITY SERVICE (contd.)											
Preparing Activity Service	Federal Information Progress Stds.		Qualified Products Lists		Industry Standards		International Standards		Military Handbooks		
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	
Army	-	-	223	14.23	736	42.33	384	33.33	72	57.19	
Navy	-	-	882	56.28	582	33.40	128	11.11	34	27.0	
Air Force	39	100	453	29.0	304	17.49	640	55.53	14	11.11	
DLA	-	-	7	0.44	116	6.67	-	-	6	4.7	
Total Document Basics	39	100	1567	100.	1739	100.	1152	100	126	100.	

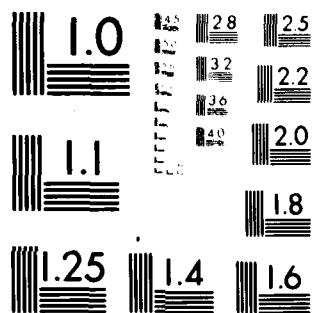
AD-A086 056

STERLING SYSTEMS INC MCLEAN VA F/O 5/2  
BASELINE DESCRIPTION AND ANALYSIS OF THE OPERATIONS RELATED TO --ETC(U)  
MAR 80 D R CHAUDHARI, A R KRISHNA N00167-78-C-0101  
UNCLASSIFIED 1604-VOL-2 NL

2 - 2

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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

Table: 3.4-2 \*NUMBER OF ACTIVE LINE ITEMS BY DOCUMENT CATEGORY AND PREPARING ACTIVITY SERVICE (contd.)

Preparing Activity Service	Federal Handbooks		USAF ANA Standards		ANA Design Standards		AF - Navy Aero Blts		USAF Specifications	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Army	-	-	3	.55	-	-	-	-	-	-
Navy	-	-	154	28.20	25.	28.40	-	-	-	-
Air Force	-	-	389	71.25	63	71.6	-	-	-	-
DLA	-	-	-	-	-	-	-	-	-	-
Total Document Basics	0	0	546	100	88	100	-	-	-	-

Table: 3.4-2 *NUMBER OF ACTIVE LINE ITEMS BY DOCUMENT CATEGORY AND PREPARING ACTIVITY SERVICE (contd.)										
Preparing Activity Service	Other Dept. Directives		Navy Aero Bits		USAF Design Stds.		Est. No. of Addendums to Basic Documents		Total of Basics and Addendums	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	% Basic	No.	Pct.
Army	-	-	-	-	-	-	7,606		25,520	100
Navy	-	-	10	58.82	-	-	6,500		21,807	100
Air Force	5	55.55	7	41.18	8	100	3,471		11,646	100
DLA	4	44.45	-	-	-	-	1,264		4,243	100
Total	9	100	17	100	8	100	18,841	42.46	63,216	100

Exhibit 3.4-3 Preparing Activities Interviewed

ARMY

Material Development and Readiness Command  
Alexandria, Virginia 22314  
Mr. L. Carr  
703-274-9028

U.S. Army Mobility Equipment Research and Development Command  
Fort Belvoir, Virginia 22060  
Mr. E. J. Nalls  
703-664-5306/5278

AIRFORCE

Air Force Departmental Standardization Office (DEPSO)  
Andrews Air Force Base  
Washington, D. C. 20334  
Mr. Corridor  
202-981-4373

Aeronautical Systems Division, AFSC: (11)  
ASD/ENESS  
Wright - Patterson AFB, Ohio 45433  
Mr. Faust  
513-255-6281

FEDERAL CIVIL AGENCY

U.S. Department of Energy: Property and Equipment Management Branch (AEC)  
Washington, D. C. 20545  
Mr. F. Roche  
202-353-4407

disk drives, Mag-card typewriters, IBM System 6 word processing, Visual Graphics Pos -1 photoduplicators and conventional type writing equipment.

The turnaround period required for the preparation of a final draft is dependent on the physical characteristics of the document. Documents being revised are frequently completed in five to seven working days, while original documents and documents requiring the preparation of line drawings, graphics or fold outs are prepared over three to eight months.

#### Figure 3.4-1

Figure 3.4-1 illustrates the processing of new documents forwarded to NPFC by preparing activities.

The document is received by the NPFC Catalog Branch Technical Section (Code 1032) and reviewed for compliance with Mil. Std. 961 and 962. Documents in compliance with the preparation standards are recorded in the DODISS and processed for initial printing and distribution. Documents not in compliance with the preparation standards are returned to the preparing activity for correction.

The NPFC Customer Service Division, RISE Section (Code 1052), assigns print quantity requirements and initial distribution status to the document, prepares a Procurement Record and notifies the Material Department (Code 300) of the document status.

Documents processed by RISE (Code 1052) and the Technical Section (Code 1032) are batched and forward to NPPSO for printing. Printed document quantities are received from NPPSO contractors and initially distributed to the designated users and subscribers. Approximately 70% of the initially printed quantity is distributed, with the remaining 30% stocked for warehouse issue.



**NPFC Catalog Branch, Technical Section (1032)**  
Receives Basic, Prepares Document Control Card

**Document Basic Originated by Preparing Activity, Print Order (5604), Transmittal and Camera Copy Forwarded**

**Inspect Basic to Ensure Compliance (F Mil. Std. 961 & 962)**

**Complies?**

**Yes**

**No**

**NPFC Technical Branch (1032)**

**Forward Document Package to NPPSO**

**Match 5604 to Document Basic and Jacket**

**File Basic and Jacket. Wait for 5604 to be Sent From 1052.**

**Delay**

**Forward Annotated Print Order to 1032**

**Forward Low Level Card to Material Department (300)**

**Prepare Low Level Card**

**Prepare Procurement Record Card**

**Print Order (5604) Received at RISE Section (1052). RISE Assigns Print Quantity Required**

**Annotate Problems. Prepare Transmittal and Return Basic to Preparing Activity**

**KEY**

- Originals
- Add to
- Separate
- Transport
- Inspect
- Storage

#### 4.0 ANALYSIS OF NPPSO OPERATIONS IN SUPPORT OF WAREHOUSE CONTROLLED DOCUMENTS

The NPPSO supports NPFC in the procurement of COG I and warehouse controlled documents. The analysis of NPPSO presented in this section examines those operations in support of NPFC warehouse controlled documents.

The analysis is presented in the following sections:

- Description of NPPSO Operations for the Initial Procurement and Replenishment of Warehouse Controlled Documents
- Estimated Initial Procurement and Replenishment Printing Volumes
- Cost Estimates for Major NPPSO Functions/Operations

Major analysis areas covered in this section include:

- NPPSO Processing of NPFC Procurement Orders
- Estimated Initial Procurement and Replenishment Printing Volume for Fiscal Year 1979
- Cost Estimates for Major NPPSO functions and Operations Supporting NPFC

Each of the above are discussed in detail in the following pages of this section.

#### 4.1 DESCRIPTION OF NPPSO OPERATIONS FOR THE INITIAL PROCUREMENT AND REPLENISHMENT OF WAREHOUSE CONTROLLED DOCUMENTS

This section examines NPPSO operations supporting the initial and replenishment procurement of NPFC warehouse controlled documents.

The operations charts depicting the processing of new or revised basic documents, in-house replenishment printing and the billing cycle for printing actions are included in this section.

The initial procurement of new basic documents, the replenishment of existing documents and the billing of document preparing activities for printing actions, were determined to be the principal NPPSO operations supporting NPFC for warehouse controlled documents.

On-site observation of activities and interviews with the NPPSO staff and management provided the basis for the operations descriptions. The following operations charts were developed as a result of these efforts:

Figure 4.1-1 Processing of New or Revised Basic Documents

Figure 4.1-2 In-House Printing of Document Replenishment Orders

Figure 4.1-3 Billing for Document Printing

Some pertinent comments on each of these charts are presented below.

Figure 4.1-1

NPFC forwards new and revised basic documents to NPPSO for initial procurement. NPPSO prepares specification for printing by private contractors via GPO.

The printing contractor provides NPPSO with two samples of the basic document and forwards the remaining quantity to NPFC. The sample documents are forwarded to VITRO laboratories for the preparation of microfiche negatives. Microfiche negatives are retained by NPPSO for archival storage files.

Figure 4.1-2

NPFC forwards sample basic documents to NPPSO for stock replenishment printing. The majority of replenishments are produced by using paper plate print masters which are discarded after completion of the printing run. The use of private contract printers for replenishment actions is limited to those orders that exceed NPPSO capabilities.

Figure 4.1-3

NPPSO charges sponsoring activities for initial and replenishment document printing. Requisitions received from NPFC are assigned job cost estimates and forwarded for printing. Job cost estimates are verified and receiving activities fund records are debitted for the apportioned amount. Fund records and print orders are forwarded to NPPSO accounting and NPFC for payment.

FIGURE 4.1-1 NPPSO: PROCESSING OF NEW OR REVISED BASIC DOCUMENTS

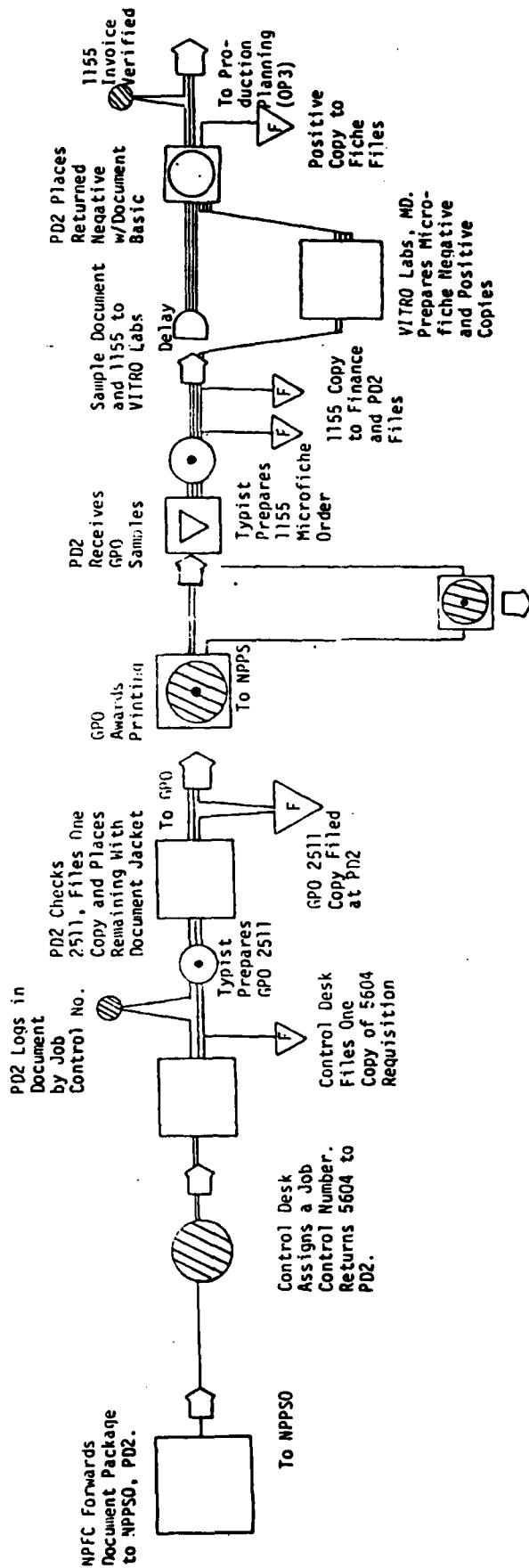


FIGURE 4.1-2 IN-HOUSE PRINTING OF DOCUMENT REPLEISHMENT ORDERS

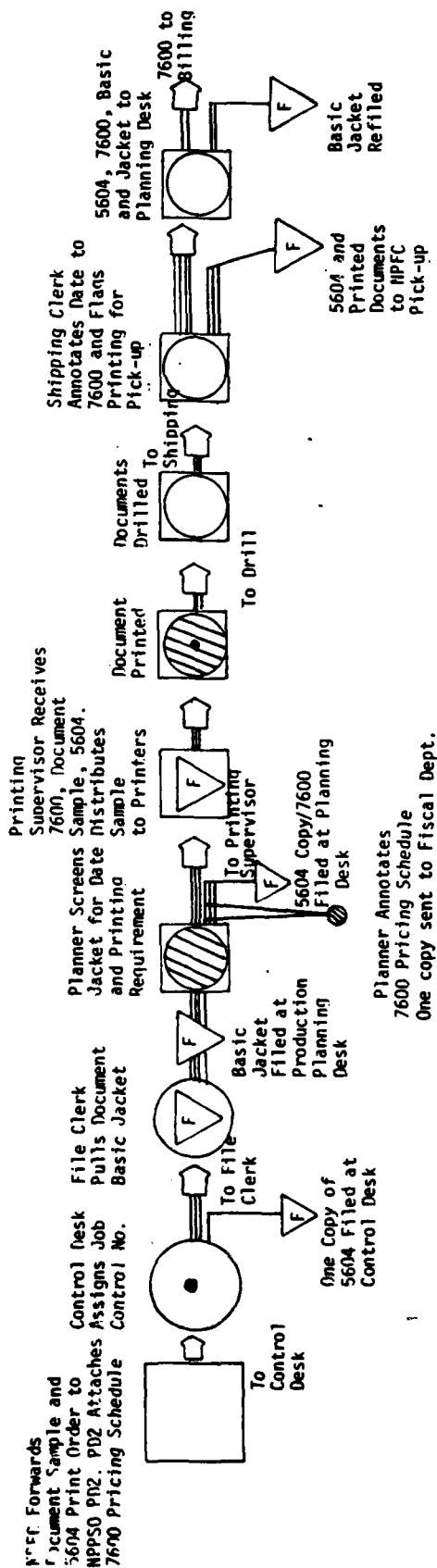
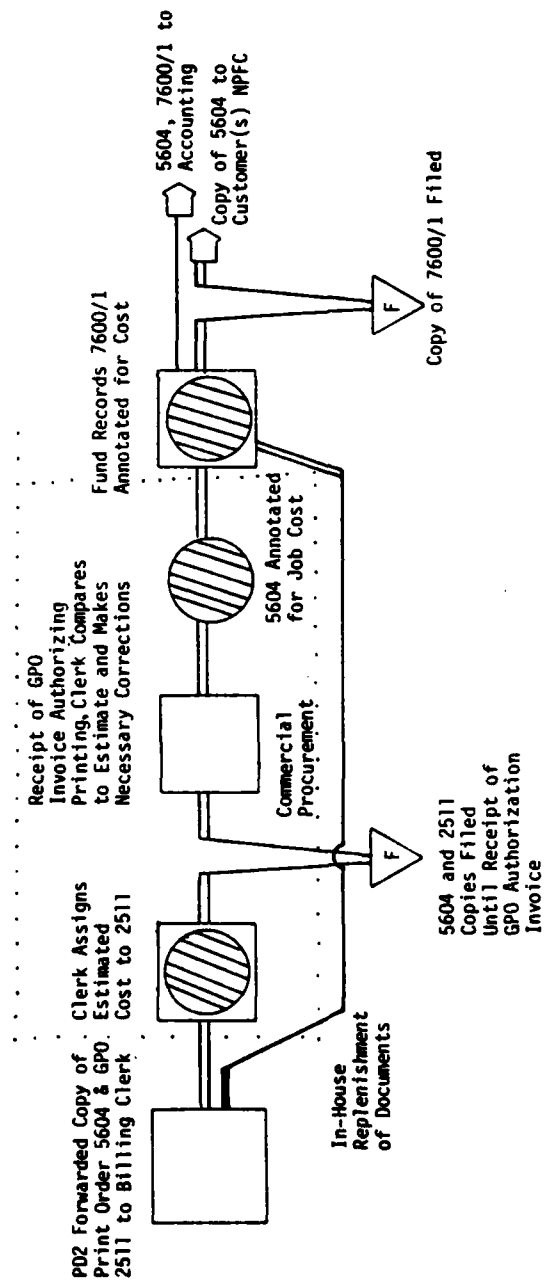


FIGURE 4.1-3 NPPSO: BILLING FOR DOCUMENT PRINTING FROM PRIVATE CONTRACTORS



NOTE: The steps covered under the dotted area are for the billing procedure which applies only to the commercially procured printing. These steps are omitted for in-house printing.

## 4.2 ESTIMATED INITIAL PROCUREMENT AND REPLENISHMENT PRINTING VOLUMES

### 4.2.1 Introduction

This section examines the volume of initial procurement and replenishment printing conducted by NPPSO in support of NPFC operations for the warehouse controlled documents.

Initial procurement and replenishment printing actions are estimated for aggregate volume of document copies and number of pages. Information on the initial procurement printing actions is developed for each of the document categories.

### 4.2.2 Data Collection and Methodology

Information used for the development of estimates was obtained from NPFC and NPPSO production reports and records. Aggregate totals for initial procurements and replenishment printing were provided by NPPSO and are the basis for estimates of printing volumes.

Development of information on printing actions by document category was based on the NPPSO Initial procurement log for specifications and standards.

### 4.2.3 Summary of Results

An examination of NPPSO printing activity for initial procurements and the estimated volume of initial procurement and replenishment printing is presented in the following tables.

Table 4.2-1 Characteristics of NPPSO Printing Activity  
(Initial Procurements)

Table 4.2-2 Estimated Initial Procurements and Replenishment Printing  
Volumes (FY 1979)

The following paragraphs summarize the information presented in the tables.



Table 4.2-1

Examination of the NPPSO Military Specification Control Logs provided the data summarized in Table 4.2-1. The information presented is based on a sampling of print orders recorded during fiscal year 1979.

A total of 1271 initial procurement orders were examined from the sampled logs. The average number of document copies, for the sampled orders was 1,570 with an average of 13.9 pages per document. Based on this information, a typical initial printing job required an estimated 21,823 pages. Military Specifications constituted the major category of documents ordered, accounting for 65.6% of the initial procurements and 48.4% of total production for the sampled orders.

Table 4.2-2

In fiscal year 1979, an estimated 20,412 print orders were received at NPPSO that included 4,800 initial procurement orders and 15,612 replenishment orders.

Initial procurements required an average of 1,570 copies per order for a total quantity of 7,536,000 documents. Replenishment print orders required an average of 200 copies for a total quantity of 3,122,400 documents. The combined total of 20,142 print orders required the production of 10,658,400 document copies. Applying an NPPSO estimated average of 13.9 pages per document the total number of pages produced/purchased by NPPSO for NPFC were 148,151,760.

**Table 4.2-1 CHARACTERISTICS OF NPPSO PRINTING ACTIVITY (INITIAL PROCUREMENTS)**

Table 4.2-1 CHARACTERISTICS OF NPPSO PRINTING ACTIVITY (INITIAL PROCUREMENTS)											
DOCUMENT CATEGORY	LINE ITEMS		DOCUMENT CHARACTERISTICS							PRINTING QUANTITY	
	NO.	PCT	Printed Page Side		Blank Page Side		Total No. Pages	Total Copies	Average Per L/I		
			No.	Pct.	Avg.	No.				Pct.	Avg.
Military Specifications	834	65.6	9,802	50.3	11.8	9142	49.7	11.0	9,472	965,992	1,158
Military Stds. Handbook	43	3.4	1,856	52.8	43.2	1660	47.2	38.6	1,758	94,967	2,208
Military STDS, Sheet Form	81	6.3	194	56.7	2.4	148	43.3	1.8	171	92,345	1,140
DOD Directives	9	.70	104	51.0	11.60	100	49.0	11.11	102	9,375	1,042
Qualified Products Lists	215	17.0	1,053	52.8	4.9	913	47.2	4.3	983	367,397	1,709
Military Handbooks	13	1.0	3,402	55.0	26.17	2788	45.0	214.5	3,095	6,100	469
DOD Standards	5	.40	826	50.4	165.2	814	49.6	162.8	1,820	15,840	3,168
Data Item Descriptions	71	5.6	370	52.2	5.2	338	41.8	4.8	354	443,821	6,251
TOTALS	1271	100	17,607	52.5	13.95	15903	47.5	12.5	17,755	1,995,837	1,570

\*NPPS no longer initially procures or replenishes DOD Directives. DOD Directives procured through DPS, Washington.

Table 4.2-2 Estimated Initial Procurements and Replenishment Printing Volumes (FY 1979)						
Printing Action	No. of Print Orders	Avg. Qty. Per Order	Total Qty. Printed	Avg. No. Pages Per Procurement	Total Pages Printed	
Initial Proc.	4,800*	1570	7,536,000	13.9	104,750,400	
Replenishment Printings	15,612*	200*	3,122,400	13.9	43,401,360	
Totals	20,412	—	10,658,400	—	148,151,760	

\* Source: NPPSO

#### 4.3 COST ESTIMATES FOR MAJOR NPPSO FUNCTIONS/OPERATIONS (Warehouse Controlled Documents)

The Navy Publications and Printing Service Office (NPPSO) in Philadelphia, Pa. provides printing services to NPFC for the warehouse controlled documents for both the initial procurements and the replenishments. The orders for initials are all commercially printed and this function is handled by NPPSO through an interface with the General Printing Office (GPO). A great bulk of the replenishment orders, approximately 95% of the total, are printed in-house by NPPSO. The remaining five percent of the replenishment orders are commercially printed in the same manner as initials. Cost estimates for major NPPSO operations have been developed under two functions - Commercial Printing and In-House Printing. A summary of cost estimates for these two functions along with major operations supporting these functions and the classes of warehouse controlled documents printed follows in the next paragraph. This data will be useful in estimating the costs of printing services provided by NPPSO to NPFC for the warehouse controlled documents.

##### 4.3.1 Summary of Results

Estimated NPPSO Costs for the warehouse controlled documents have been presented in the following three tables:

Table 4.3-1 Estimated Costs for In-House Printing

Table 4.3-2 Estimated Costs for Commercial Printing

Table 4.3-3 NPPSO - Production Equipment Cost Estimates

These tables are further discussed in the following paragraphs.

##### Table 4.3-1

In this table the direct costs are broken down by direct labor, direct supervision, equipment, and materials and supplies. Indirect overhead has been applied at a rate of \$5.63 per direct production labor hour. The direct labor costs for the four operations have been computed based upon estimates of person-hours required for processing an average replenishment job order. These

estimates were developed in concert with the management personnel at NPPSO. The total direct labor and production supervision costs (which include 35% acceleration for fringes and benefits) are representative of the actual volume of replenishment orders processed during the FY 1979. The equipment costs have been further detailed in Table 4.3-3. The total materials and supplies costs were based upon the cost of paper, chemicals and ink utilized for an average replenishment job order.

Table 4.3-2

The direct labor and supervision costs (including fringes and benefits) for each operation are based upon estimates of person-year utilized. The indirect overhead costs are a function of direct labor hours. The data for other cost elements was obtained from NPPSO's financial records for FY 1979. The commercial printing costs include the GPO and NPPSO surcharge on the printer's bill.

Table 4.3-3

This table lists all major NPPSO production equipment utilized in support of in-house printing for 95% of the replenishment orders. The data in the table for each unit was provided by the NPPSO Production Department. The annual ownership cost for each equipment unit was determined by taking original purchase price which was amortized equally on an annual basis over its useful life at an interest rate of ten percent. The salvage value at the end of useful life was considered zero. The total equipment cost (ownership and maintenance) on an annual basis was properly allocated to reflect the relative percentage utilization for the warehouse controlled documents. This total cost is summarized in Table 4.3-1.

Table: 4.3-1 ESTIMATED NPPSO COSTS FOR WAREHOUSE CONTROLLED DOCUMENTS  
(In-house Printing - 95% of Replenishments)\*\*

Function/ Operation	DIRECT COSTS					Commercial Printing and Contract Costs \$/Yr.	Indirect Overhead Costs * \$/Yr.	Total Annual Cost - For The Operation \$/Yr.
	Direct Labor \$/Yr.	Direct Supervision Costs \$/Yr.	Equipment Owner- ship & Mainte- nance Costs \$/Yr.	Direct Materials and Supplies \$/Yr.	Total Direct Costs \$/Yr.			
Publication Management Control Desk	1,390	N/A	N/A	N/A	1,390	N/A	N/A	1,390
Production Shop Plan	6,010	N/A	N/A	N/A	6,010	N/A	2,962	8,972
Production Process	317,951	22,825	33,246	101,046	475,068	N/A	134,688	609,756
Admin./ Fiscal - Close Out & Billing	1,390	N/A	N/A	N/A	1,390	N/A	N/A	1,390
Total	326,741	22,825	33,246	101,046	483,858	0	137,650	621,508

\* Overhead costs are based upon an applicable rate of \$5.63 per direct production labor hour worked.  
Source: Financial Manager NPPS-WORDIV. Overhead includes indirect management, secretarial, clerical, administrative support and facilities (excludes building space usage)  
\*\* The costs are based upon a total replenishment volume of 10,522 orders for the FY 79. This volume represents 95% of the total replenishments (11,075) processed.

Table: 4.3-2 ESTIMATED NPPSO COSTS FOR WAREHOUSE CONTROLLED DOCUMENTS  
(Commercial Printing - 100% of Initials & 5% Replenishments)<sup>x</sup>

Function/ Operation	DIRECT COSTS					Commercial Printing and Contract Costs \$/Yr.	Indirect Overhead Costs * \$/Yr.	Total Annual Cost - For The Operation \$/Yr.
	Direct Labor \$/Yr.	Direct Supervision Costs \$/Yr.	Equipment Owner- ship & Mainte- nance Costs \$/Yr.	Direct Materials and Supplies \$/Yr.	Total Direct Costs \$/Yr.			
Procurement Printing Specialist	12,500	3,500	N/A	175	16,175	22,000**	6,505	44,680
Publication Management Control Desk	150	N/A	N/A	N/A	150	N/A		150
Commercial Printing Via GPO	N/A	N/A	N/A	N/A	N/A	1,093,729+		1,093,729
Fiscal/Admin. - Billing	11,737	N/A	N/A	N/A	11,737	N/A	6,004	17,741
Total	24,387	3,500	N/A	175	28,062	1,115,729	12,509	1,156,300

\* Overhead costs are a function of direct labor hours. Included are indirect management, administrative and secretarial support and facilities (excludes building space usage).

\*\* Cost of microfilming for archival records.

+ The commercial printing costs may not be representative of the actual volume of the commercial printing orders processed during FY 79 due to the time lag between the receipt of actual bill and production for the individual order.

x These costs are based upon actual volume of 5142 initials and 553 replenishments commercially printed during FY 79.

TABLE: 4.3-3 NPPSO - PRODUCTION EQUIPMENT COST ESTIMATES (contd.)

EQUIPMENT DESCRIPTION	Date Instal.	Unit Purchase Cost		Avg. Life	Annual Ownership Costs		Annual Maintenance Costs		Pct. Use for WHSE/C Documents
		\$	\$		Years	\$	\$/Year	%	
35x45 Harris	1942	10,830	1,107	40	40	1,107	2,276	10	10
17x22 Harris	1961	16,640	1,833	25	25	1,833	2,226	20	20
17x22 Harris	1961	16,640	1,833	25	25	1,833	2,226	20	20
Plate Maker	1969	2,612	307	20	20	307	240	15	15
Collater	1976	2,934	478	10	10	478	290	10	10
Stitcher	1976	3,819	622	10	10	622	380	10	10
Folder	1976	3,233	526	10	10	526	320	10	10
Seybold Drill	1964	7,390	868	20	20	868	115	30	30
N/Gren Drill	1962	2,878	338	20	20	338	115	30	30
Bunn Tying Machine	1962	985	116	20	20	116	120	60	60



TABLE: 4.3-3 NPPSO - PRODUCTION EQUIPMENT COST ESTIMATES

EQUIPMENT DESCRIPTION	Date Instal.	Unit Purchase Cost		Avg. Life	Annual Ownership Costs		Annual Maintenance Costs		Pct. Use for WHSE/C Documents
		\$	Years		\$	Years	\$/Year	%	
4975 A&M	1979	45,892	8	8	8,602		10,590		60
4975 A&M	1979	43,332	8	8	8,122		10,590		60
4875 A&M	1977	41,663	8	8	7,809		10,590		60
416 Norphin	1979	14,614	8	8	2,739		*		60
416 Norphin	1977	14,614	8	8	2,739		*		60
312 Norphin	1977	9,765	8	8	1,830		*		60
Stitcher - 7805	1979	4,427	10	10	721		*		40
Folder - 7805	1979	4,225	10	10	688				40
A. B. Dick Stitcher	Rental	Lease Cost		N/A					40
A. B. Dick Stitcher Folder	Rental	Per Year		N/A	10,860				40
Folder	Rental	10,860		N/A					40

\* Included in the maintenance cost for the A&M

### ACRONYM LIST

ANA	ARMY-NAVY-AIR FORCE Designation
ASO	Aviation Supply Office
COG I	Cognizance Symbol for "OI" Publications and "II" Forms
DIDS	Data Item Descriptions
DOD	Department of Defense
DOD. DIR.	Department of Defense Directive
DODISS	Department of Defense Index of Specifications and Standards
DOD. STD	Department of Defense Standard
DOD STD 4120.3M	Defense Standardization and Specification Program Policies, Procedures and Instructions
DSSP	Defense Specification and Standardization Program
FIPS	Federal Information Processing Standard
L/I	Line Item
MIL. STD. 961	Military Standard Outline of Forms and Instructions for the Preparations of Specifications and Associated Documents
MIL. STD. 962	Military Standard Outline of Forms and Instructions for the Preparation of Military Standards and Military Handbooks
NAVINST	Navy Departmental Instruction
NPFC	Naval Publications and Forms Center

ACRONYM LIST (contd)

NPPSO	Naval Publications and Printing Service Office
QPL	Qualified Products Lists
SD-1	Standardization Directory
WHSE	Warehouse
W/C	Warehouse Controlled Documents

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